

Exploitation of fur seals and sea lions from Australian, New Zealand and adjacent subantarctic islands during the eighteenth, nineteenth and twentieth centuries

John K. Ling

P.O. Box 271, Clare, South Australia 5453

ABSTRACT

Details of skin cargoes of fur seal *Arctocephalus* spp. and sea lion *Neophoca cinerea* and *Phocarcos hookeri*, originating from southern Australia, New Zealand and the adjacent subantarctic islands in the 18th, 19th and 20th centuries have been collated from several secondary historical sources. These sources quoted quantities of skins in terms of actual tallied numbers, as untallied "cargoes" or as casks, sacks or bundles. Untallied cargoes were converted into numbers by averaging tallied cargoes; and casks, sacks and bundles were arbitrarily deemed to contain 40, 20 and 5 skins respectively.

Annual and total yields of skins are presented for ten separate areas in the region: Bass Strait, King Island, Kangaroo Island, Western Australia, New Zealand, Bounty Islands, Auckland Islands, Antipodes Islands, Campbell Island and Macquarie Island. At least 1 367 000 fur seal skins were harvested between 1792 and 1948/49 in the whole of the Australasian region. More than 1 309 000 skins — 96% of the total — were taken up to 1830. Records indicate that only about 4 100 *Neophoca* and 5 800 *Phocarcos* were obtained from their respective areas.

These figures must be regarded as minimal, as it is likely that many cargoes were obtained by English, American and French vessels and shipped directly to European or Asian markets. There was also likely to have been a considerable wastage and loss of skins as well as many going unreported and directly to overseas markets. Nevertheless, summation of these historical cargoes gives some idea of the sizes of the seal colonies that were subjected to this exploitation, the intensity of the early sealing industry and the speed of its demise. Given the likely amount of wastage, the total harvest probably exceeded 1.5 million seals. The specific identities of fur seals harvested at the various islands are not known precisely, but it is likely that only *A. forsteri* and *A. pusillus doriferus* occurred on fur seal islands around southern Australia. *A. forsteri* was the probable target species around New Zealand, but the identity of the original species at Macquarie Island is still open to considerable doubt.

Sealing provided the New South Wales colony with its first export industry. It also generated significant local employment. At today's money values the industry up to 1830 would have been worth at least one hundred million dollars. Australian colonial sealing followed a very similar pattern to the industry in the South Atlantic; being contemporaneous, accounting for about the same number of fur seals, and depleting the stocks just as severely and rapidly. The recovery of Australasian fur seal populations, however, appears not to have been as dramatic as those in the South Atlantic; due, possibly, to differing quantities of available food.

Key words: Exploitation, Fur seals, Sea lions, Skin cargoes, Colonial sealing.

INTRODUCTION

According to Bethell (1980), sealing in Bass Strait began as early as 1791, when two vessels, the *Mary Ann* and *William and Ann*, went sealing out of Port Jackson. The first recorded seal skin cargo actually landed in Australia came from Anchor Island in Dusky Sound at the southern end of the South Island of New Zealand in 1793 (McNab 1909). On 25 December 1798, the colonial brig *Nautilus*, under the command of Captain Bishop, arrived in Port Jackson with a cargo of seal skins from the Furneaux Group, Bass Strait. By 1802 there were at least 200 men employed in the sealing industry. Two years later, one firm alone — Campbell and Company of Sydney — employed 180 men. Thus began Australia's first export industry

and thriving ship-building, chandlery and crewing enterprises on shore. In the 206 years since, and more particularly up to the 1830s, almost 1.4 million fur seal skins were harvested around Australia's southern coast, New Zealand and at the adjacent subantarctic islands.

While it is clear from the many historical accounts written about these regions that large numbers of fur seals and lesser numbers of sea lions were taken, there appear to have been few attempts to collate the cargoes into annual and total yields or carry out further analyses of the seal harvests. Warneke and Shaughnessy (1985) presented a graphical summary of (combined) fur seal and sea lion skins landed in Sydney from Bass Strait and New Zealand; and Ling (1987) presented similar data for

New Zealand Fur Seals at Kangaroo Island, New Zealand and the Subantarctic. This study is based on many more sources of catch data than those cited above and gives a clearer idea of the size of the pristine populations of seals harvested at the various sealing localities. It may also provide a useful background to population studies of seals being carried out at some of those places today.

Captain James Cook RN discovered seals at Dusky Bay in southern New Zealand in 1773 (McNab 1909); it was from here that the first seal skin cargo was landed at Sydney in 1793. Seals were discovered on islands of the Furneaux Group by the crew of the ill-fated *Sydney Cove* which was wrecked there in 1797 (Cumpston 1973). Matthew Flinders (1814), who was sent in 1798 to fetch what remained of the salvaged stores, gave a detailed description of the fur seals and sea lions (hair seals) that he encountered, stating (p. cxxix) that "the number of seals exceeded everything we had, any of us, before witnessed . . ."; and it was this account which led to Captain Bishop in the *Nautilus* undertaking the first known successful sealing venture in Australian waters. Cumpston (1973) stated that King Island at the western end of Bass Strait was first sighted in 1799 by William Reid and seals were discovered there in 1801. However, Hooper (1974) says that William Campbell was the first known mariner to sight the island in 1797. Flinders (1814) discovered Kangaroo Island in 1802, when a member of his crew was bitten by a seal there. It was from there, also in the same year, that Peron (1816) first described, albeit very briefly, the Australian Sea Lion *Neophoca cinerea*.

Sealers were quickly at work at all of these localities shortly after their discovery, and skin cargoes were soon being landed at Sydney and Hobart. John Boulton wrote a lively first-hand account of sealers and sealing around Australia and New Zealand during the 1820s in his *Journal of a Rambler*, which is quoted extensively by the Begg brothers (1979), but was not itself edited and published until seven years later (Starke 1986).

By 1809 populations of seals in Australia had already been severely depleted and vessels were sent southward to search for new sealing grounds. On 4 January 1810, Frederick Hasselburgh in the Campbell-owned brig, *Perseverance* (Fig. 1), discovered and named Campbell Island; and in July 1810 he first sighted and landed on Macquarie Island, where he noted its teeming populations of fur seals (Cumpston 1968; Kerr 1976). Other islands to the south of New Zealand had been discovered a few years previously. All

had colonies of fur seals or sea lions or both, which were quickly attacked by sealing gangs operating out of Sydney or Hobart (Kerr 1976).

At least four factors complicate the task of trying to quantify early sealing activities. Firstly, it is almost impossible to know precisely what species of fur seals were harvested at the different localities, because no records were kept for reasons of secrecy, and because the seal colonies were almost totally exterminated by indiscriminate slaughter, with no thought of studying and conserving them or protecting the viability of the industry. The present distribution of fur seals *Arctocephalus* spp., and sea lions *Neophoca cinerea* and *Phocarctos hookeri*, are shown in Figures 2 and 3. It cannot be assumed, however, that the species occurring at the various localities today were the same that were there before sealing began. Secondly, the historical sources that have been consulted list only those cargoes that were landed in or exported from Australia and New Zealand. They do not record cargoes taken by foreign-owned ships directly to their destinations. Thirdly, it is most unlikely that all harvests and landings have been recorded. Fourthly, there must have been a large amount of wastage due to seals being killed but not retrieved and spoilage of skins. For these last three reasons, any figures must be regarded as underestimates.

The purpose of this paper is to draw attention to the many sources of information relating to early sealing operations in the Australasian region; and to quantify, in space and time as far as the available data permit, seal harvests at different areas in the region. From this it may be possible to gain some idea of the size of the pristine seal populations that supported what was an extremely intensive, lucrative and important early industry.

METHODS

Seal skin cargoes that were landed at various Australian ports — in particular Sydney and Hobart where the larger operators were based — are cited more or less extensively in the many accounts dealing with Australian and New Zealand maritime history. The same cargo figures appear in many accounts, but, inevitably, most narratives contain some figures which do not appear in others. When as many cargoes as possible have been accounted for, it is possible to derive estimates of at least minimal harvests landed each year from each of the areas listed below; as well as an estimate of the total numbers of seals killed over the entire sealing period.

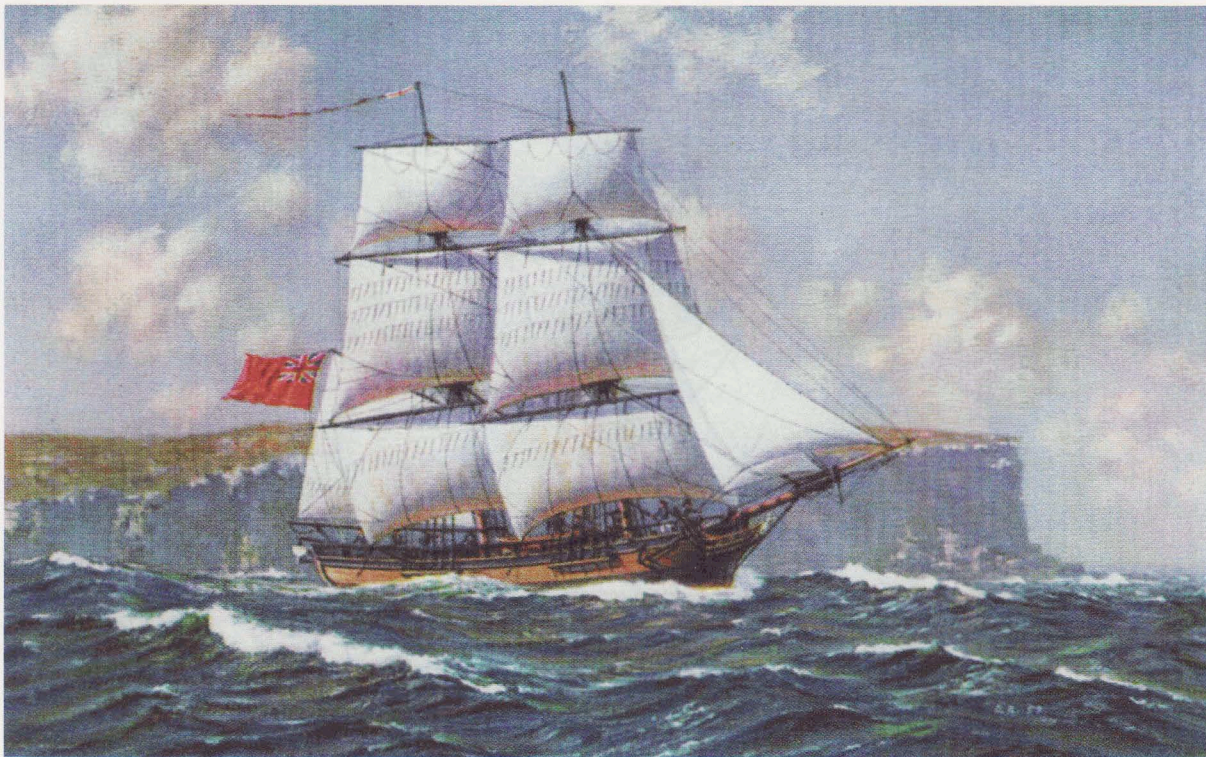


Figure 1. The colonial brig *Perseverance* sails on her maiden voyage from Sydney in 1807, by Oswald Brett (from Newman 1961; reproduced with permission).



Figure 16. Robert Campbell's wharfside home and property in Port Jackson 1820, by John Allcott (from Newman 1961; reproduced with permission). (See page 341 for text reference.)

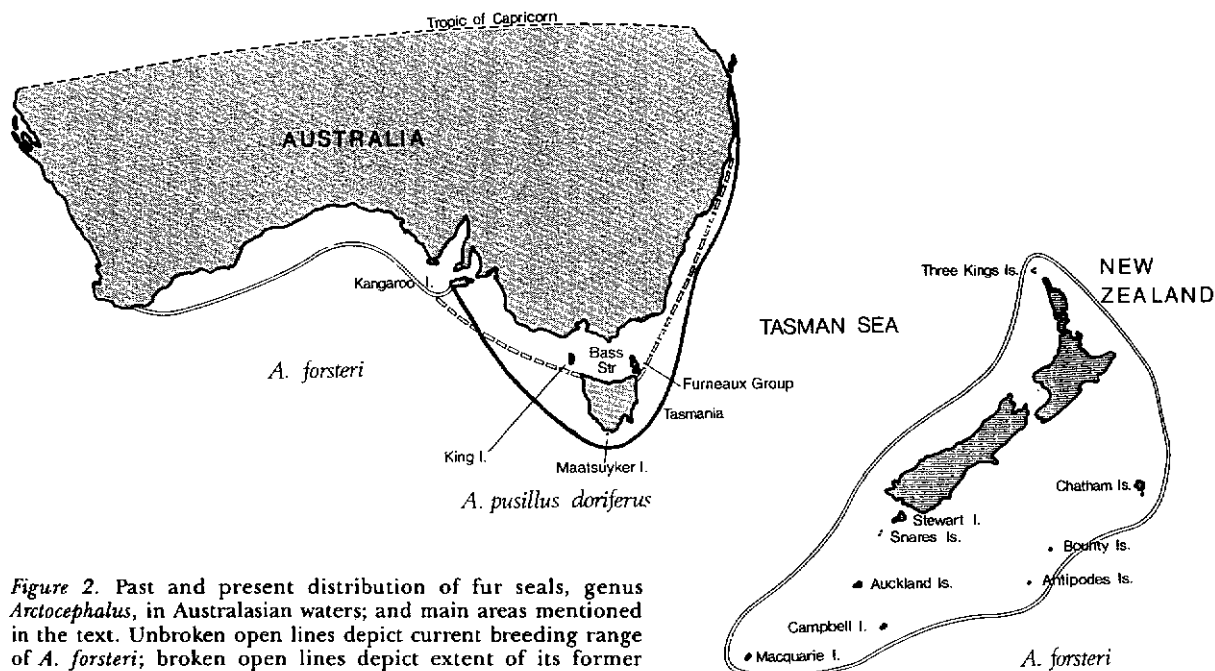


Figure 2. Past and present distribution of fur seals, genus *Arctocephalus*, in Australasian waters; and main areas mentioned in the text. Unbroken open lines depict current breeding range of *A. forsteri*; broken open lines depict extent of its former range and stragglers in Australia; solid line depicts current distribution of *A. pusillus doriferus* (from Ling 1978).

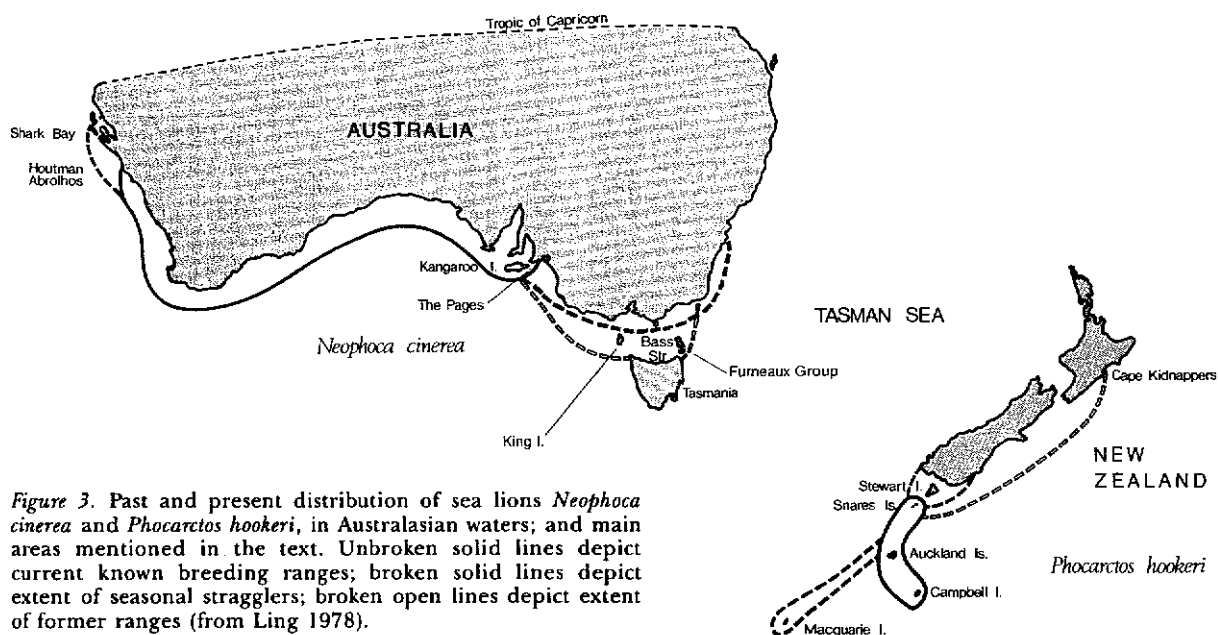


Figure 3. Past and present distribution of sea lions *Neophoca cinerea* and *Phocartos hookeri*, in Australasian waters; and main areas mentioned in the text. Unbroken solid lines depict current known breeding ranges; broken solid lines depict extent of seasonal stragglers; broken open lines depict extent of former ranges (from Ling 1978).

No primary sources have been consulted, but the following substantial works have been carefully culled for information relating to seal skin cargoes: Begg and Begg (1979), Cumpston (1968, 1973, 1974, 1977), Fowler (1980), Hainsworth (1972) Kerr (1976), McNab (1909, 1914), Nicholson (1983, 1985), Norman (1946), Plomley and Henley (1990), Richards (1982, 1995, 1996) Ruediger (1980), Steven (1978, 1983) and Syme (1984). These

authors all cite primary sources for their information, including shipping and cargo movements. For the purpose of this study the name of each vessel, its departure and return port and dates of departure, arrival at the sealing grounds, departure and arrival back in port have been collated where possible, along with the quantity of skins, if any, carried or left behind. This information is set out in the Appendices 1 to 9 under the following

headings, which do not necessarily conform with either political or biogeographical regions:

1. Bass Strait and King Island combined (see below)
2. Kangaroo Island
3. Western Australia
4. New Zealand
5. Bounty Islands
6. Auckland Islands
7. Antipodes Islands
8. Campbell Island
9. Macquarie Island.

Records were, inevitably, incomplete; particularly in regard to dates and places where cargoes of skins were obtained. Entries in the appendices frequently were compiled from more than one source in order to be as complete and accurate as possible. Vessels often returned to port from their last known stopping place after a long cruise that took them to many other localities. This probably occurred in later years when seals were scarce and had to be searched for, instead of being taken from a pristine locality where there was an abundance of seals.

It was often difficult to determine the precise year in which a cargo of skins was obtained, because gangs were known to have been left at sealing sites for up to 18 months or even longer. Generally speaking, there were two sealing seasons: December-January when breeding adults were killed and April to June when postmoult yearlings were taken in their prime, first adult-type pelage (McNab 1909). In this account all cargoes have been assigned to the year of their arrival in port unless the vessel actually left the sealing grounds during the previous year or arrived in port no later than the end of January; particularly when a large quantity of skins was being carried. Any resultant discrepancies are likely to have minimal impact on the general thrust of this review. Vessels were sometimes recorded as having been engaged in sealing, but without information on cargo, no attempt was made to estimate the quantity of skins, if any, that might have been taken.

Cargoes were cited either as numbers of skins, "cargo of skins", casks, sacks or bundles, "a few skins", "some hundreds", or "a large number of skins". Untallied cargoes and the one "large number" were calculated as the average of all tallied cargoes taken decade by decade for each of the above areas. They will be referred to as untallied cargoes throughout the text. A "few" skins was taken to be a quarter of an average "cargo", some hundreds

to be 300. McNab (1909) cited one cask of 42 skins; so a cask was deemed to contain 40 skins, a sack 20 skins and a "bundle" 5 skins for the purpose of this account. As these measures were used so infrequently, they would have amounted to only a few thousand skins altogether and any errors in the derived totals would be relatively minor. When a cargo was shown as a range of two figures the mean value was used.

Yearly and grand totals were calculated for each sealing area. The various totals are the summation of all the individual tallied and untallied cargoes and have not been rounded off, despite the precision implied by not doing so. Percentages, however, are quoted to the nearest whole number throughout the paper. Annual harvests for most areas were plotted as histograms.

RESULTS

Fur Seals Arctocephalus spp. (Figs 4 and 5, see back cover)

1. Bass Strait

Cargoes considered under this heading were recorded in the various literature sources as originating from "Bass Strait", "the Straits", "Bass's Strait" or from a specific locality within the Bass Strait region (Fig. 6, see front cover), other than from King(s) Island which is dealt with separately. The first fur seal cargo was shipped from Bass Strait in 1798 and the last in 1858, according to the sources consulted. Tallied cargoes for that 60-year period amounted to 136 458 skins handled by colonial vessels and a further 14 750 skins known to have been taken by English whaling ships directly to England between 1800 and 1806 (Hainsworth 1972, p. 133). Untallied cargoes were estimated to amount to 43 820 skins, making a total Bass Strait harvest of at least 193 659 fur seals.

Figure 7 depicts the annual harvests from 1798 to 1858, and full shipping and cargo details are listed in Appendix 1. Total and average harvests and cumulative total and percentage yields by decade, including those attributed to English ships, are set out in Table 1.

By 1830, 192 434 seal skins had been taken by colonial and English crews; amounting to 99% of the total sealing harvest in this area. Even by 1820, 85% of the total shipments had been taken.

Sealing persisted intermittently in Bass Strait into the early twentieth century and while the colony at Seal Rocks, off Phillip Island (38°32'S, 145°06'E), may have been a target, two other areas, Judgement Rocks

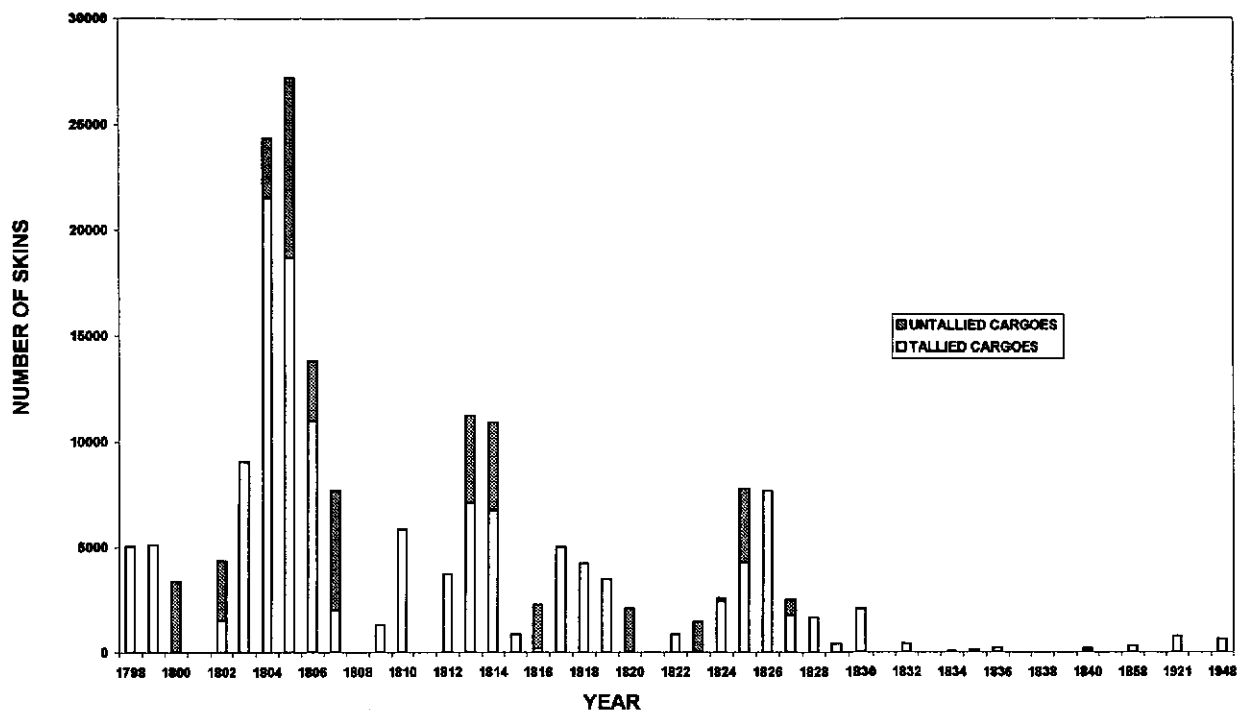


Figure 7. Fur seal skin cargoes landed from Bass Strait, not including King Island or English cargoes: 1798–1948 (see text for explanation).

Table 1. Fur seal skin harvests by decade from Bass Strait, not including King Island but including English cargoes (1800–1806): 1798–1948/49.

Decade/Year	Number of skins	Average per year	Cumulative total	Cumulative percentage
1798–1800	13 493	4 498	13 493	7
1801–1810	108 345	10 835	121 838	62
1811–1820	43 724	4 372	165 562	85
1821–1830	26 872	2 687	192 434	99
1831–1840	925	93	193 359	99
1858	300	300	193 659	99
1921(1)	750	750	194 409	100
1948/49(1)	691	691	195 100	100

(1) Mentioned in text but not included in Appendix 1.

(39°30'S, 147°08'E) and Moncoeur Island (39°14'S, 147°31'E) yielded 350 and 400 skins, respectively, in 1921. In 1948/49 there was a regulated cull at Seal Rocks and Lady Julia Percy Island (38°25'S, 142°00'E) when 691 seals were killed and processed (McNally and Lynch 1954). Thus, at least 195 100 fur seals were killed in Bass Strait between 1798 and 1948/49.

2. King Island

Details of fur seal skins stated definitely in the various sources to have come from King(s) Island are also listed in Appendix 1. Sealing began at King Island in 1801 and lasted only until 1805, apart from three small cargoes in 1812, 1819 and 1825. In that time 48 118 fur seals were taken, made up of 44 795 skins in tallied cargoes and 3 323 in untallied cargoes. The data are too few to portray graphically; however, annual harvests and cumulative totals

and percentages are shown in Table 2. From 1801 to 1805 almost 47 000 seal skins were shipped from King Island, amounting to 98% of its total harvest.

The only tallied cargo for 1810–1819 was 560 skins, which figure is given for the untallied cargo of 1812. Since the locality "Bass's Strait" sometimes referred specifically to King Island and sometimes did not, some

Table 2. Fur seal skin harvests from King Island: 1801–1825.

Year	Number of skins	Cumulative total	Cumulative percentage
1801	2 400	2 400	5
1802	4 300	6 700	14
1803	21 543	28 243	59
1804	15 725	43 968	91
1805	3 000	46 968	98
1812	560	47 528	99
1819	560	48 088	100
1925	30	48 118	100

cargoes or parts of cargoes designated as having originated from "Bass's Strait" may in fact have come from King Island. Thus the total figure may be a little higher, thereby reducing the Bass Strait harvest by the same amount. Warneke (1997, in litt.) suggests that cargoes taken during the "boom" period probably came from a single, dense colony, whereas later cargoes were made up of seals taken at several places as sealers endeavoured to fill their ships' holds. As has been done, it is best to include King Island in the whole of Bass Strait, in order to obtain a correct estimate of the total harvest from southeastern Australia. Bass Strait and King Island cargo statistics for the period 1798 to 1948/49 have therefore been combined (Fig. 8).

The total recorded harvest by colonial and English vessels amounted to 243 866 skins. This figure is slightly (648 skins) more than the sum of the separate Bass Strait and King Island totals, plus the cargoes taken by English

crews (243 218 skins), because the untallied cargoes were calculated using the two sets of cargo statistics together.

Total, including English vessels cargoes, and average harvests and cumulative total and percentage yields by decade are set out in Table 3.

In Bass Strait and at King Island, 1803–1806 were the most productive years, when almost half of the total harvest of skins was taken. Average annual yields were halved and halved again in the 1811–1820 and 1821–1830 decades, respectively. By 1820 the total yield amounted to 88%; and sealing in Bass Strait, as an industry, was effectively finished by 1830, when 99% of the total harvest had been obtained. Seals have been protected in Victoria since 1890 (Warneke 1982). In Tasmania, sealing regulations were introduced in 1889, but sealing was permitted until the 1920s (Warneke and Shaughnessy 1985).

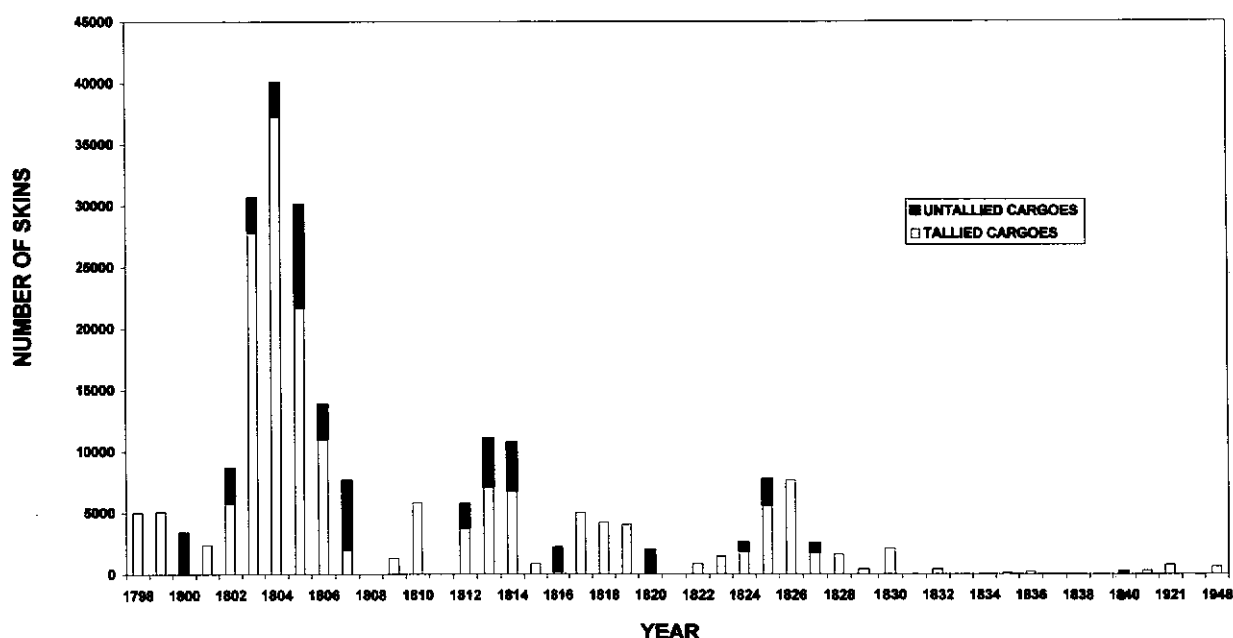


Figure 8. Fur seal skin cargoes landed from Bass Strait and King Island combined, not including English cargoes: 1798–1948 (see text for explanation).

Table 3. Fur seal skin harvests by decade from Bass Strait and King Island combined and including English cargoes (1800–1806): 1798–1948/49.

Decade/Year	Number of skins	Average per year	Cumulative total	Cumulative percentage
1798–1800	13 493	4 498	13 493	6
1801–1810	155 134	15 513	168 627	69
1811–1820	45 701	4 570	214 328	88
1821–1830	26 872	2 687	241 200	99
1831–1840	925	93	242 125	99
1858	300	300	242 425	99
1921(1)	750	750	243 175	100
1948/49(1)	691	691	243 866	100

(1) Mentioned in text but not included in Appendix 1.

3. Kangaroo Island

Sealing began at Kangaroo Island in 1803, a year after its discovery by Flinders, and the last known shipment of pelts was in 1834 (Appendix 2). During that period 98 973 fur seal skins were shipped to Sydney and Hobart; made up of 85 797 in tallied cargoes and 13 176 in untallied cargoes. It appears that some fur seals were still being taken from caverns around the coast in 1844 (Nunn 1989); and Wood Jones (1925) reported that 20 were taken on North Casuarina Island (36°05'S, 136°42'E) in 1912. Fur seals were not protected in South Australia until 1919 and then only in Gulf St Vincent, Spencer Gulf and adjacent waters to the north of Kangaroo Island; after which they were fully protected under the *Fauna Conservation Act, 1964* (Warneke 1982). There is also a record

(Cumpston 1974) of 30 seals being taken at Guichen Bay in the south-east of South Australia in 1831. Adding these to the Kangaroo Island total gives a figure for South Australia of 99 023 skins.

In addition to fur seal and sea lion skins, wallaby skins and large quantities of salt were obtained at Kangaroo Island (Fig. 9); salt being used to cure seal skins prior to shipment. Salting was the preferred method of preserving skins for the English market, because it resulted in a better product than air- or sun-dried stretched skins which were shipped to Canton. Some vessels therefore went to Kangaroo Island to collect salt before they commenced their sealing activities: there or elsewhere. Thus it is likely that some Kangaroo Island skins were included in cargoes gathered at other localities, and vice versa.



Figure 9. Salt being collected from the bed of a salt lagoon on Kangaroo Island and bagged ready for shipment (from Bauer 1959).

Figure 10 depicts the annual harvests at Kangaroo Island. Total and average annual harvests and cumulative total and percentage yields by decade are set out in Table 4.

No explanations can be found for the absence of any records of seal skin cargoes from Kangaroo Island for the years 1805–1808, 1811 and 1813; or for the small shipments in 1809 and 1814. It should be noted, however, that the Antipodes Islands and, later, Macquarie Island, discovered in 1810, were being actively worked at these times by vessels operating out of both Sydney and Hobart. It should also be noted that this was a relatively quiet period for sealing in Bass Strait, for possibly the same reason or due to external market forces (see Discussion). From 1826 onwards, however, there is a sharp drop in the size of cargoes, heralding, no doubt, the

demise of Kangaroo Island's sealing industry. By 1830 97% of the total harvest had been obtained.

4. Western Australia

Records of seal skin harvests from Western Australia are sparse and cover the period 1823 to 1843/44 (see Appendix 3). However, it seems that seals were being hunted around King George Sound much earlier. In 1803, sailors from the French ships *Geographe* and *Casuarina* encountered an American sealing party from the brig *Union* in a bay to the east of the Sound (Garden 1977). There are no records of seal skin cargoes before 1823 in the secondary sources consulted; however, there may be records in shipping documents held by American institutions. In 1835, seal skins to the value of £1,500 sterling were handled

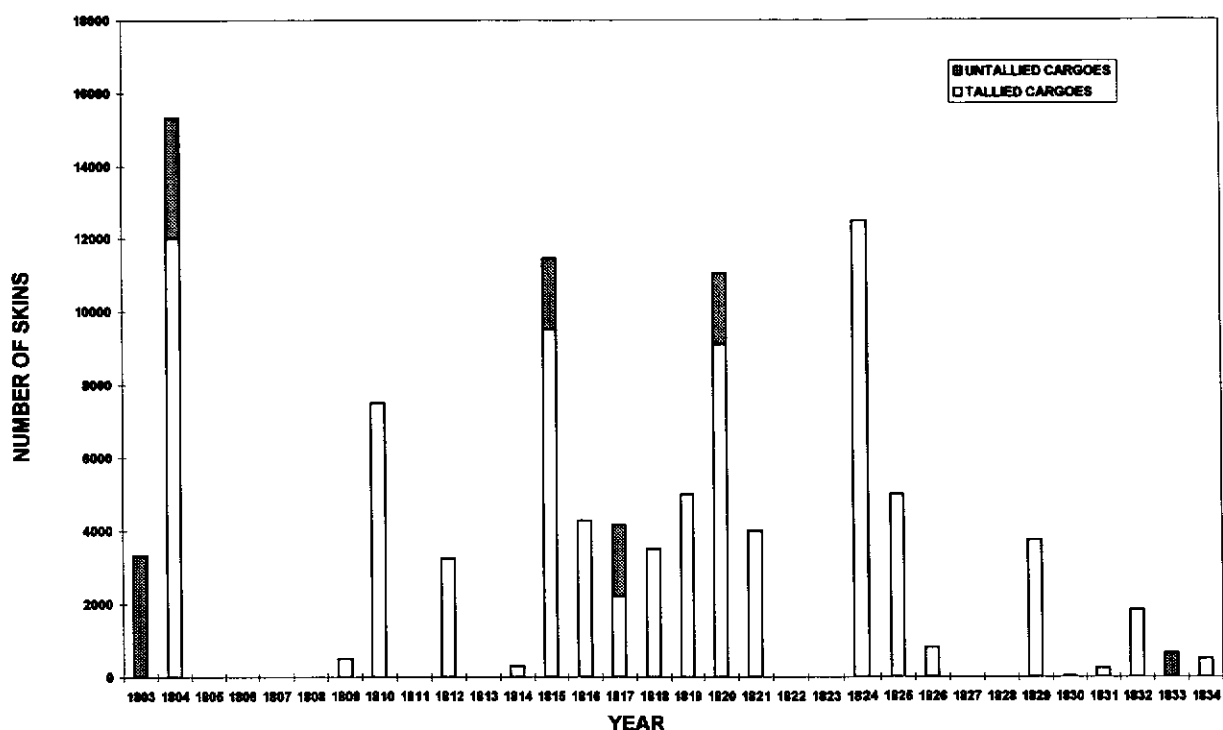


Figure 10. Fur seal skin cargoes landed from Kangaroo Island: 1803–1834.

Table 4. Fur seal skin harvests by decade from Kangaroo Island: 1803–1834.

Decade	Number of skins	Average per year	Cumulative total	Cumulative percentage
1803–1810	26 666	3 333	26 666	7
1811–1820	43 005	4 301	69 671	70
1821–1830	26 077	2 608	95 748	97
1831–1834	3 225	806	98 973	100

through the port of Albany. Rintoul (1964) quotes values of seal skins from 15 shillings to more than £2. If an average price of £1 a skin is applied, that particular consignment would have amounted to about 1 500 skins, the figure used in Appendix 3. Abbott (1979) quotes two other quantities of fur seal skins not attributed to any vessel: 41 in 1827 and 494 in 1920. Tallied cargoes up to 1843 amounted to 7 159 skins from which the one untallied cargo was calculated to be 795, giving a total recorded harvest by colonial vessels of only 7 954 skins in Western Australia. Including the 1920 figure gives a total of 8 448 fur seals recorded as having been obtained in Western Australia. Seals have been protected in Western Australia since 1892 (Warneke 1982).

5. New Zealand

Included under this heading are the New Zealand mainland and adjacent islands; islands in Foveaux Strait, Stewart Island (45°00'S, 168°00'E) the Snares Islands (48°00'S, 166°35'E) and the Chatham Islands (43°45'S, 175°55'E).

In addition, the sources of many skin cargoes originating from around, and probably beyond, New Zealand are not stated in the literature; so the cargoes are deemed to have come from "New Zealand". Yearly harvests of fur seals from 1792/93 to 1946 are shown graphically in Figure 11 and shipping details of all cargoes are listed in Appendix 4.

The first recorded cargo of fur seal skins harvested in the entire region covered by this account was obtained by a gang left at Dusky Sound at the southern end of the South Island from November 1792 to October 1793. They were from the vessel *Britannia*, under the command of Capt William Raven (owned by John St Barbe of London), which had arrived in Port Jackson on 25/26 July 1792. The disappointing cargo of only 4 500 skins was shipped directly to Calcutta (Gill 1966/67). According to shipping records (Cumpston 1977), there were two ships named *Britannia* in the area around this time (the other owned by Samuel Enderby and captained by Thomas Melville). Steven (1983, p. 87) stated that each of these vessels obtained a cargo of seal skins

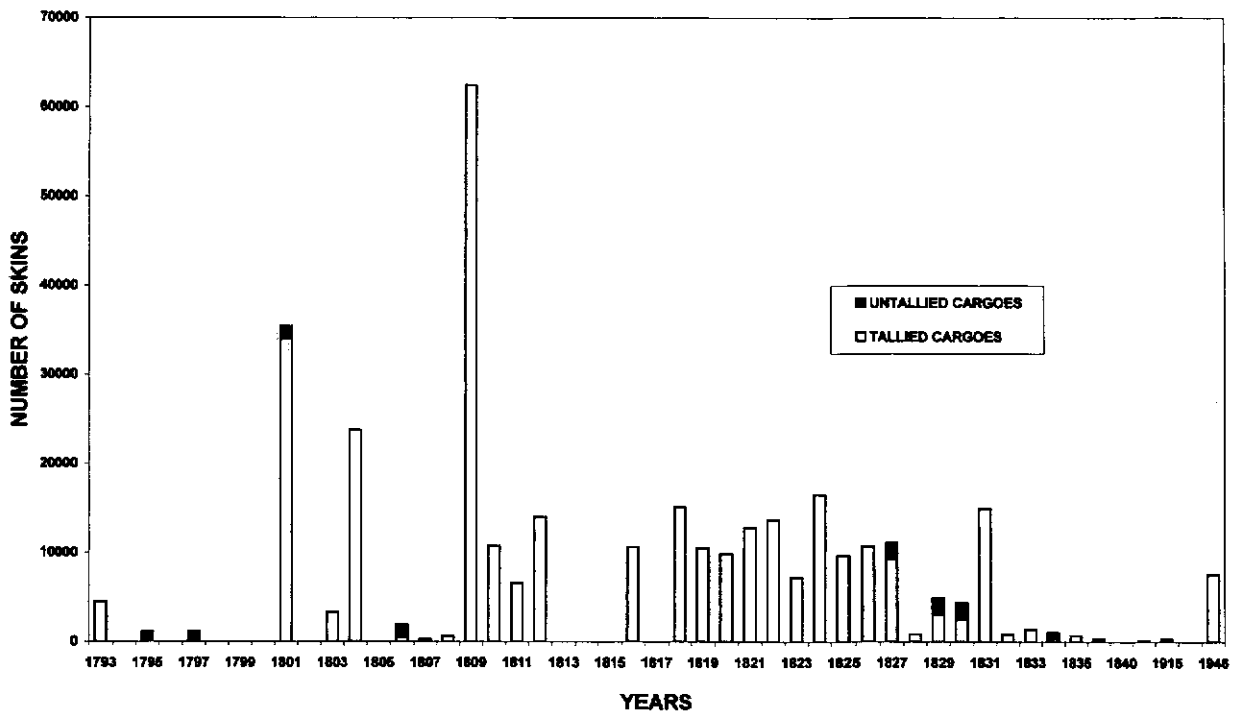


Figure 11. Fur seal skin cargoes landed from New Zealand localities, excluding Richards' (1982) figures: 1792/93–1946 (see text for explanation).

at Dusky Bay, the second shipment containing 4 000 skins. However, while Cumpston records the movements of the two ships named *Britannia* and ascribes ownership conversely to that stated by Steven, he does not quantify the cargoes. Several authors mention the 4 500 seal skins obtained by William Raven, but none other than Steven makes any reference to the second cargo of 4 000 skins. I believe they are one and the same cargo, and use the figure of 4 500 skins as reported by so many other writers.

The total harvest of fur seal skins from around New Zealand was 329 620, made up of 318 373 skins in tallied cargoes and 11 247 skins in untallied cargoes. Total and average cargoes and cumulative total and percentage yields by decade are set out in Table 5.

By 1820, 64% of the total harvest of fur seals from around New Zealand had been

taken and this had risen to almost 92% by 1830. After 1836 there were sporadic harvests in occasional years of a few hundred skins until 1946, when an open season yielded 6 187 pelts (Sorensen 1969). Richards (1982) gave total skin cargoes for the years 1826, 1828, 1829, 1830, 1831 and 1833 as 18 570, 7 647, 12 530, 4 448, 4 681 and 2 481, respectively; making a total of 50 357. All of Richards' figures except that for 1831 exceeded the sums of individual cargoes plotted in Figure 11. If Richards' figures are used for those years instead of the sum of the individual cargoes in Appendix 4 (37 165) obtained from the various literature sources, the total is increased by 13 192 to 342 812. However, it is possible that some parts of these cargoes in fact came from southeastern Australia; as did a few included in some of McNab's (1909) figures. The total harvest figure for southeastern Australia and New

Table 5. Fur seal skin harvests by decade from New Zealand: 1792/93–1946.

Decade/Year	Number of skins	Average per year	Cumulative total	Cumulative percentage
1793–1800	6 750	844	6 750	2
1801–1810	138 435	13 844	145 185	44
1811–1820	66 784	6 678	211 969	64
1821–1830	91 859	9 186	303 828	91
1831–1840	19 147	1 915	322 975	98
1843	147	147	323 122	98
1874	11	11	323 133	98
1915	300	300	323 433	98
1946	6 187	6 187	329 620	100

Zealand therefore could be increased if Richards' figures are used. The small yields in 1805–1808 may have been due to sealing activities having shifted to the Antipodes Islands and their abundant fur seal colonies (see below).

Richards (1996) stated that 65 sealing voyages to New Zealand and the southern islands are known from 1800 to 1820, which equates to an average of only 3.25 voyages a year. Between 1825 and 1830, the number of voyages to New Zealand for the stated purpose of sealing averaged more than 12 each year; but by then mixed cargoes were being carried (Richards 1995). The number of cargoes extracted from the various sources for the purpose of this paper is 89 for the period 1800 to 1820 and 54 between 1825 and 1830, including Macquarie Island. If Macquarie Island voyages are excluded, the figures are 67 and 48, respectively. The 1800 to 1820 figures, excluding Macquarie Island, are therefore very similar to Richards' figure, but there were 24 fewer seal skin cargoes than voyages recorded for the 1825–1830 period and the average per year is 8, compared with 12 as stated above. Given the great inroads made into the seal stocks before 1820, the post-1825 harvests, based on known skin shipments and in light of the increasing number of mixed cargoes, may not have been understated by a great amount in this paper. A minimum figure for New Zealand could still lie between 330 000 and 350 000 fur seal skins.

6. Bounty Islands (47°45'S, 179°03'E)

Sealing took place at the Bounty Islands sporadically between 1807 and 1891 during which time 54 448 fur seal skins were harvested. Of this total, 53 500 (98%) were taken in the first two years. In fact, there are cargo records only for 1807/08 (46 000), 1808/09 (7 500), 1829 (28), 1880 (620) and 1891 ("several hundred", say, 300). Appendix 5 sets out the shipping details.

7. Auckland Islands (50°45'S, 166°10'E)

The Auckland Islands were discovered in 1806 and records of fur seal harvests there date from 1808 to 1916 (see Appendix 6); with an unexplained break of 15 years between 1809 and 1824. A total of only 42 719 skins were shipped from this locality, including one untallied cargo of an estimated 251 skins in 1881, calculated as the average of all post-1833 cargoes. Sealing virtually ended in 1833 up to which time 36 700 skins (93%) had been shipped. After that year and following a 38-year gap there were several cargoes of a few hundred fur seal pelts obtained at the Auckland Islands until 1916.

8. Antipodes Islands (49°41'S, 178°47'E)

These small islands were first seen in March 1800. The fur seal industry based on the Antipodes Islands (sometimes referred to as the "sealing islands") lasted only from 1804 to 1809, with a small shipment in 1825 also recorded (Appendix 7). In that time 359 377 fur seals were reported to have been taken; annual harvests and cumulative totals and percentages are set out in Table 6.

Table 6. Fur seal skin harvests from the Antipodes Islands: 1804/05–1825.

Year	Number of skins	Cumulative total	Cumulative percentage
1804/05	20 100	20 100	6
1805/06	249 000	269 100	75
1806/07	36 919	306 109	85
1807/08	3 000	309 019	86
1808/09	50 100	359 119	100
1825	258	359 377	100

As Appendix 7 shows, it is not always possible to be sure in which year seal skins were actually harvested or shipped from the Antipodes. Neither is there any explanation forthcoming from the various texts as to why sealing should have ceased after 1808/09, following a harvest in excess of 50 000 pelts in that season (but see Discussion) or a small harvest in 1804/05, followed by shipments totalling 249 000 in the next season. The 1825 figure of 258 resulted from a 6-month cruise in New Zealand waters, including the Antipodes, but there is no evidence as to how many came from the latter locality. Its smallness, however, does not make any significant difference to the main harvest figures.

9. Campbell Island (52°33'S, 162°09'E)

Fur seals were harvested sporadically at Campbell Island over a 121-year period between 1810, when the island was discovered, and 1931 when the seals were afforded full protection. Details of all cargoes shipped from Campbell Island are set out in Appendix 8, and annual harvests are shown graphically in Figure 12. The total harvest was only 29 989 skins, including 104 sacks (approximately equal to 2 080 skins). Of this total, more than half was taken in the first year and 21 394 (71%) by 1825. From 1813 to 1820 several ships sailed from Campbell Island with cargoes. Although sealing gangs had been left there, there appear to be no reports of what seal products if any had been obtained (Kerr 1976).

10. Macquarie Island (54°30'S, 157°58'E)

In perusing the various sources of data it soon became apparent that sealing vessels did

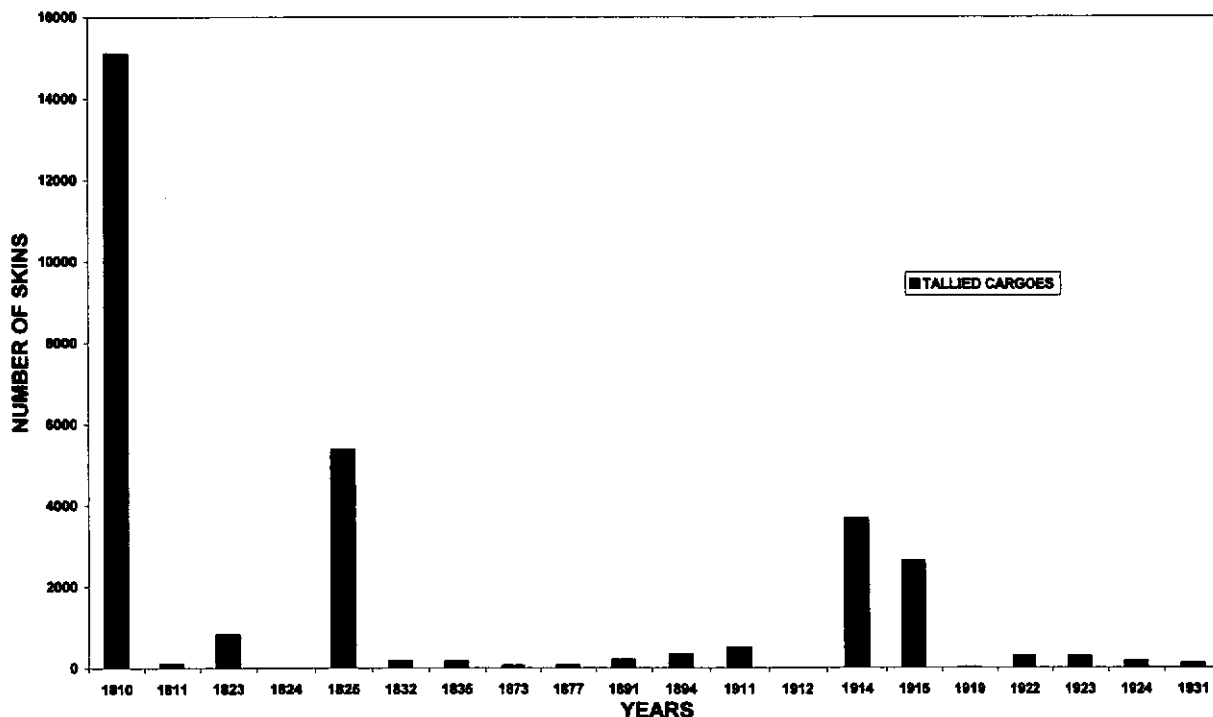


Figure 12. Fur seal skin cargoes landed from Campbell Island: 1810-1931.

not always travel directly between their home port and Macquarie Island. They often went to and fro by way of New Zealand, Campbell Island or any of the other adjacent islands. The exact origin of a seal skin cargo therefore could not always be determined. All shipping and cargo details believed to apply specifically to Macquarie Island are set out in Appendix 9. Annual totals are depicted in Figure 13.

Harvesting of fur seals at Macquarie Island began in 1810, the year of its discovery, and continued without break until 1829. Further sealing voyages took place in 1837, 1874, 1894 and 1914. The total harvest at Macquarie Island was 199 444 skins, made up of 184 498 in tallied cargoes and 14 946 in untallied cargoes. Total and average harvests and cumulative total and percentage yields by decade are set out in Table 7.

There is an oft-quoted newspaper account (see Cumpston 1968, p. 35) stating that above 100 000 skins were harvested "in the season". Some authors have taken this to mean the first season, but shipping records do not support this figure by summation of individual cargoes, which fall short of this quantity by about 41 000 skins. Certainly, however, at least 159 000 seals were harvested between 1810 and 1813. Shaughnessy and Fletcher (1987), using data from Cumpston (1968 and 1974) only, arrived at a figure between 179 500 and 193 300 fur seal skins obtained at Macquarie Island over the entire period of exploitation. Their upper figure agrees well with that

presented here. The fate of the fur seal industry at Macquarie Island may well have been sealed by 1826 (the same year in which the Kangaroo Island industry was in sharp decline), by which time 189 050 skins (95% of the total harvest) had been shipped from the island.

Because Macquarie Island was an important source of fur seal skins and elephant seal oil (Hindell and Burton 1988), many cargoes were listed as "skins and oil". However, in later years as fur seal stocks declined, shipping interests turned to whaling in the south seas. Thus cargoes of skins and oil may well have contained whale oil which, along with the skins, may have originated elsewhere in the South Pacific.

Australian Sea Lion Neophoca cinerea (Fig. 14, see back cover)

Only thirteen records of Australian Sea Lion harvests could be found in all the sources that were consulted. These are set out in Table 8. There were eleven ships' cargoes, a quantity taken in 1920, and the record of 147 sea lions killed at Houtman Abrolhos by survivors of the ill-fated *Zeewyk* which was wrecked there in 1727 (Abbott 1979). Only about 4 110 sea lions are recorded as having been taken throughout southern Australia: 2 110 on Kangaroo Island, 1 521 in Bass Strait (of which 500 were from north-west Bass Strait, a term sometimes applied to Kangaroo Island) and 485 in Western Australia (including the

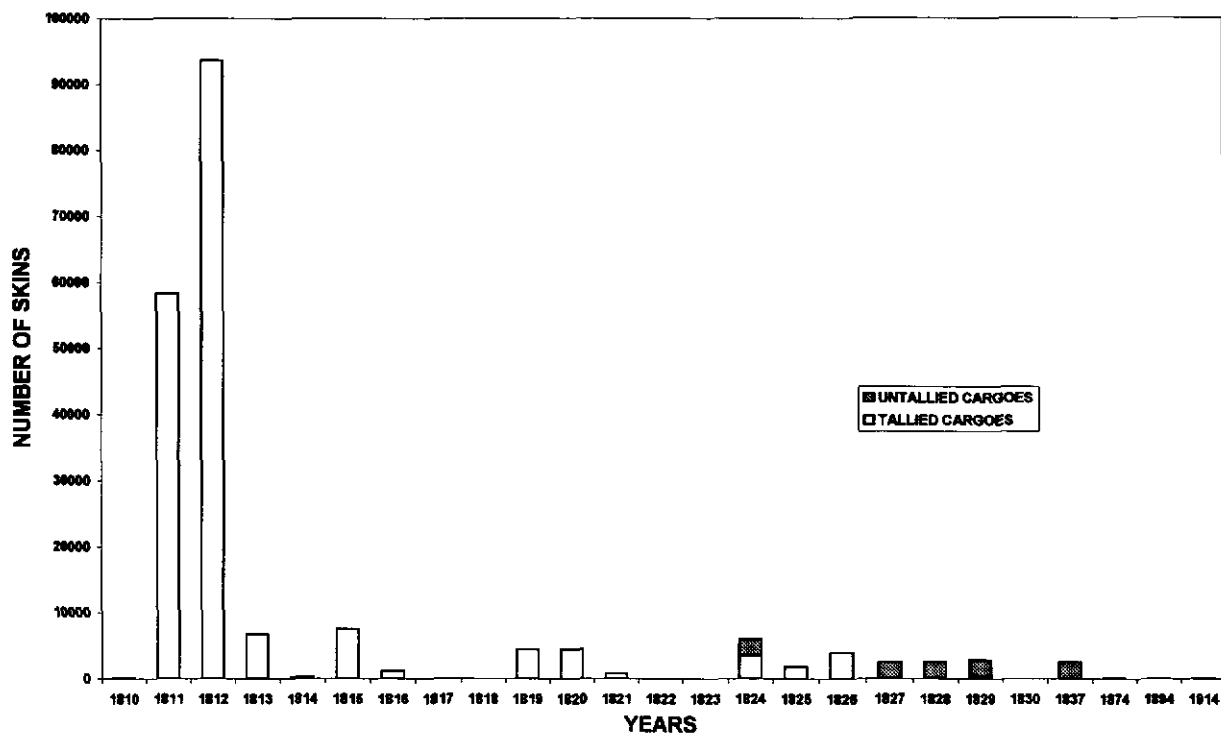


Figure 13. Fur seal skin cargoes landed from Macquarie Island: 1810–1914.

Table 7. Fur seal skin harvests by decade from Macquarie Island: 1810–1914.

Decade/Year	Number of skins	Average per year	Cumulative total	Cumulative percentage
1810–1819	172 082	17 208	172 082	86
1820–1829	24 711	2 471	196 793	99
1837	2 471	2 471	199 264	100
1874–1914	180	—	199 444	100

Table 8. Numbers of Australian sea lion skins harvested: 1727–1920.

Date	Number of skins	Locality	Remarks/(Reference)
— 1727	147 (1)	Houtman Abrolhos	Killed by survivors of <i>Zeewyk</i> (Abbott 1979, p. 377)
Dec. 1798	180	Cape Barren Island	(Cumpston 1973, p. 11)
Sept. 1801	500 (2)	Bass Strait/King Island	+ 2 500 fur seals (<i>Ibid.</i> , p. 43)
Apr. 1802	some = 10 (3)	Kangaroo Island	(Flinders 1814, p. 182)
Feb. 1804	"cargo" = 336 (4)	Bass Strait	(Fowler 1980, p. 87)
June 1804	400 (2)	Kangaroo Island	+ 2 075 fur seals (<i>Ibid.</i> , 1980, p. 68)
Oct. 1819	5	Bass Strait	(Cumpston 1977, p. 116)
Aug. 1820	100	N.W. Bass Strait	(Fowler 1980, p. 180)
Sept. 1821	100	Kangaroo Island	(Nicholson 1983, p. 73)
— 1827	11	King George Sound	(Abbott 1979, p. 378)
Mar. 1832	600	Kangaroo Island	(Cumpston 1974, p. 117)
Apr. 1833	1 000	Kangaroo Island	(<i>Ibid.</i> , p. 120)
Apr. 1834	400	N.W. Bass Strait	(<i>Ibid.</i> , p. 122)
— 1920	327	Recherche Archipelago	(Abbott 1979, p. 383)
Total	4 116		

(1) number of sea lions killed for food, (2) estimated as $\frac{1}{6}$ th of total cargo, (3) probably no more than 10, (4) estimated as average of all tallied cargoes.

Zeewyk survivors' tally). Almost half of this total was taken in 1832, 1833 and 1834 at Kangaroo Island or north-west Bass Strait. The fur seal industry at Kangaroo Island had virtually collapsed by then.

Hooker's (New Zealand) Sea Lion *Phocarcas hookeri* (Fig. 15, see back cover)

Fifteen cargoes of Hooker's Sea Lion skins were listed in the various literature sources, details of which are set out in Table 9. The total harvest amounted to only 5 769. Even if the mixed cargo in 1877 were all sea lions, the total would have been increased by only about 60 to 5 830. Of this total, 5 378 or 93% of the harvest had been taken by 1825; 4 247 or 73% in 1825 alone. This may have been a reflection of the declining fur seal populations that had been heavily targeted up to that time and were so severely depleted that even the much less valuable sea lion pelts were being taken. That being so, the sea lion population itself may also have suffered drastic reduction from the 1825 onslaught on what might have been a relatively small stock, anyway.

DISCUSSION

Careful perusal of the various accounts used in the course of this study has demonstrated some inconsistencies by authors in their interpretation of original material. (It should be reiterated here that primary sources were not consulted, reliance being placed on secondary sources.) I have endeavoured to unravel these inconsistencies, particularly in relation to quantities and sources of fur seal skins, in order to present as accurate a picture as possible of the early seal skin industry, and to make some comparisons between the designated areas. The difficulties involved in

doing so have already been discussed in the Introduction and Methods sections of this account and need not be discussed further here.

At least 1 367 000 fur seals were harvested at colonies in southern Australia, New Zealand and the nearby subantarctic islands by sealers operating mainly out of Australian and New Zealand ports, as well as by English and American gangs, between 1792 and 1948/49. More than 98% of that total was obtained in the first 40 years; and the first 10 years of sealing at each of the localities yielded 61% of the combined total. By the mid-1830s fur seals continued to be hunted sporadically at Campbell Island and around New Zealand, but only 22 000 skins were taken there in the next 110 years. John Boulton wrote in his journal that, in eight months, 24 men averaged only one fur seal kill each in 20 days while working the Fiordland area of New Zealand in 1826 (Begg and Begg 1979). To all intents and purposes the entire fur seal skin industry was finished by 1830.

No account has been taken of the unknown numbers of fur seals killed but lost, skins exported directly (i.e., not through colonial ports) or for other reasons not reported at all, or skins that spoiled before shipment. For example, a party of sealers left at the Open Bay Islands, New Zealand, in January 1810 had obtained 11 200 skins by November. When they were relieved *four years* later, having been abandoned by their sealing captain, 8 700 skins had survived (Begg and Begg 1979, pp. 143-44). If the unaccounted numbers of all seals killed amounted to only 10%, the total kill for the whole region could have exceeded 1.5 million. An even higher figure of around 20% would place the slaughter

Table 9. Numbers of Hooker's (New Zealand) sea lion skins harvested: 1810-1894.

Date	Number of skins	Locality	Reference
1810	193	West coast of New Zealand	Richards 1982, p. 28
1816	300	West coast of New Zealand	Cumpston 1977, p. 102
1818	500	West coast of New Zealand	McNab 1909, p. 258
	7	New Zealand	Cumpston 1977, p. 110
1823	151	Southern New Zealand	<i>Ibid.</i> , p. 150
1825	2 000	Southern New Zealand	McNab 1909, p. 343
	1 290	Auckland Islands	Cumpston 1968, p. 63
	77	Antipodes Islands	Richards 1995, p. 29
	380	Campbell Island	Cumpston 1968, p. 63
	500	New Zealand coast	Nicholson 1983, p. 109
1829	20	Auckland Islands	<i>Ibid.</i> , p. 71
1838	1	Campbell Island	Kerr 1976, p. 30
1840	135	Chatham Islands	Richards 1982, p. 51
1877	25 (1)	Campbell Island	Cumpston 1968, p. 89
1894	190	Auckland Islands	<i>Ibid.</i> , p. 181
Total	5 769		

(1) Part of a mixed cargo of 80-90 fur seal and sea lion skins.

at more than 1.6 million fur seals. However, the "lay" system for payment was intended to maximize the incentive to take as many seals as possible; so losses may not have been great.

At King Island, fur seals were hunted mainly between 1801 and 1805; and at the Antipodes Islands between 1804/5 and 1808/9. The five-year sealing periods at these two locations produced around 50 000 and 350 000 fur seal skins, respectively. Warneke and Shaughnessy (1985) believe that 300 000 or more seal skins were harvested in Bass Strait and southern Australia up to 1825. Data presented here indicate that almost 317 000 fur seals were taken in this area by that time, out of a total of almost 343 000; that is 93% of the total catch for the region was taken by 1825. More sources were consulted in the present study and this also enabled the origin of seal skin cargoes to be determined with greater confidence.

It is instructive to look at the percentages of the total seal harvests obtained from the designated areas in the last decade of the eighteenth century and by the end of the first, second and third decades of the nineteenth century (Table 10). Western Australia was excluded from the compilation because of the small number of fur seals reported to have been harvested there and the sporadic chronology. At the Bounty and Antipodes Islands sealing was virtually all over by 1810; and two-thirds the Bass Strait and King Island catch had been taken. By 1820 almost 90% of the total harvest in Bass Strait and at Macquarie Island had been obtained; while two-thirds of the totals had been obtained at Kangaroo Island and from around New Zealand. By 1830 only Campbell Island was still able to yield proportionally more skins to what was a very small total anyway; the remaining areas had given up 92 to 99% of their total harvests, and their respective industries were effectively finished.

Comparisons between harvests from the areas considered here are also interesting

(Table 11). Southern Australia, including Bass Strait, King Island, Kangaroo Island and Western Australia, contributed 26% of the total; New Zealand 24% over a longer period; the Antipodes Islands 26%; Macquarie Island 15%; with the remaining 9% coming from the other areas. The Antipodes Islands yielded slightly more than the whole of southern Australia over a very much shorter period (1804/5 to 1808/9); and Macquarie Island produced about a sixth of the total, also in a short period (1810–1829), in the process of which their seal colonies were destroyed in less than two decades. While these islands may appear at first to be small in relation to their seal harvests, it should be pointed out that the areas of land occupied by fur seals were only small parts of each island. Many of the seal islands around Australia are equally small and, again, not occupied fully by seals today. One intriguing aspect relative to the Antipodes Islands, given that *A. forsteri* is non-thigmotactic (compared with *A. pusillus*), is the densities that seem to have been attained there before sealing began (Warneke 1999, in litt.). The sheer concentration of seals on these island rookeries may well have been crucial in their demise along with a highly predictable annual cycle. Recent estimates put the Antipodes Islands population of fur seals at about 2 000 (Taylor 1992) and that of Macquarie Island at around 1 200 (Shaughnessy *et al.* 1988). By comparison, the fur seal population at the Bounty Islands is estimated to be approximately 21 500 and still increasing slowly (Taylor 1996).

Fluctuations in the size of the annual seal skin shipments may not have been due entirely to the number of fur seals present at the various localities. Equally important was the collapse of the seal skin markets in China in 1807 and England in 1809; both having been flooded with seal skins from the South Atlantic. Furthermore, a crippling duty had been placed on imported oil and skins by the English Government, to the particular disadvantage of colonial sealing; so that many

Table 10. Cumulative percentage harvests of fur seal skins in all areas except Western Australia during the late eighteenth century and the first, second and third decades of the nineteenth century.

Area	1792/93–1800 %	1801–1810 %	1811–1820 %	1821–1830 %
Bass Strait and King Island	6	69	87	99
Kangaroo Island	—	27	70	97
New Zealand	2	44	64	91
Bounty Islands	—	98	—	—
Auckland Islands	—	13	—	93
Antipodes Islands	—	100	—	—
Campbell Island	—	50	—	72
Macquarie Island	—	—	86	99

Table 11. Percentage total fur seal skin harvests by designated area.

Area	Total skins	Percentage
Bass Strait (including King Island)	243 866	18
Kangaroo Island	99 023 (1)	7
Western Australia	8 448	1
New Zealand	329 620	24
Bounty Islands	54 448	4
Auckland Islands	42 719	3
Antipodes Islands	359 377	26
Campbell Island	29 989	2
Macquarie Island	199 444	15
Total	1 366 880	100

(1) Includes 50 fur seals killed elsewhere in South Australia (see text).

sealing merchants were unable even to send relief to their gangs left at the various sealing islands. Some were not taken off until years later; others, presumably, never were (Richards 1995).

Several vessels listed by Wace and Lovett (1973) as having originated from American ports show up in the various historical accounts consulted in the course of this study as having taken seal skin cargoes in Australasia during the eighteenth and nineteenth centuries. These cargoes were either landed in Sydney or Hobart, or taken directly to foreign markets: England or China being the principal destinations. Gill (1966/67) believed that American sealers may have been working Bass Strait even before its discovery by Bass in 1797, with seal skin cargoes going direct to the northern markets. There is, however, no reported evidence of American sealing activities at any of the rookeries before their exploitation by colonial sealers began. Following that, American and Australian sealers occasionally clashed quite heatedly over sealing rights (Cumpston 1973). Murray (1927) also suggested that seals were being exploited in Bass Strait as early as 1791. This may well account for Warneke and Shaughnessy's (1985) suspicions that figures for early nineteenth century seal skin cargoes are too low. Wace and Lovett (1973) believed that American sealing activities which probably equalled those of all other nations combined were concentrated away from Australia and New Zealand. American sealers did operate in Australasia, but on a much more limited scale than colonial crews. These authors suggested, however, that Americans may have been responsible for the demise of fur seal populations in Western Australia, reported by Vancouver (1798; cited by Wace and Lovett 1973) to have been abundant but which available records show to have yielded only about 8 000 skins to colonial sealers between 1823 and 1843. A thorough search of original

ships' papers and other records held in various American institutions might reveal the extent to which that nation's sealers and whalers impinged on the stocks of fur seals in the Australasian region. In the absence of references to American or British sealing activities in this part of the world beyond those few reported by the many authors consulted here, it is tentatively concluded that the foreign presence on the Antipodean sealing grounds was not great. Furthermore, it must be reiterated that the figures collated so far have to be regarded as under- rather than overestimates.

In this study, tallied cargoes from Macquarie Island amount to 184 498 fur seal skins, plus 14 946 in untallied cargoes. More than 152 000 seals were harvested between 1810 and 1812 based on a summation from all of the sources consulted. Shaughnessy and Fletcher (1987) stated that as many as 193 300 fur seals were harvested at Macquarie Island during the entire sealing period. Again, more sources of information have been consulted in the course of the present study and this accounts for the slightly higher figures given here.

There are numerous references in the various sources of data to large quantities of seal skins being exported to the London and China markets. Some of these cargoes exceeded 100 000 pelts; however, the total number of skins reported as having left the colony falls far short of all the shipments returned from the sealing grounds prior to export. It is therefore not possible to reconcile seal harvests with exports; although the latter were sometimes useful for checking the size of incoming cargoes of skins from the sealing grounds.

It is very unlikely that the specific identities of the fur seals and sea lions harvested at the height of the early sealing industry, colony by colony, will ever be known. Shaughnessy *et al.* (1988) were unable to find any tangible evidence that would help to identify the original species on Macquarie Island, where fur seals were virtually exterminated by the early sealers. *Arctocephalus forsteri*, *A. gazella* and *A. tropicalis* occur there today. *A. forsteri* is known to have been there since 1948 and *A. tropicalis* as early as 1959; both species in very small numbers (Shaughnessy and Fletcher 1987). These authors believe it is possible that *A. tropicalis* was the original species, known as the "Upland Seal", but no identifiable remains or images have been discovered. Richards (1994), unsurprisingly, has found no historical evidence to support the hypothesis of a distinct species of "Upland

Seal". Rather, he agrees with Taylor (1992) who has suggested that "Upland Seals" were in fact juvenile and sub-adult New Zealand Fur Seals, *Arctocephalus forsteri*.

In 1946, 6 187 *A. forsteri* were harvested during an open season in New Zealand and it may be presumed that the same species was involved in the sporadic small harvests earlier in the twentieth century. If so, that species does not appear to have been totally extirpated within its original geographic range, and was probably the only fur seal hunted in and around New Zealand since sealing began in 1792.

The picture is even less clear in southeastern Australia for a number of reasons. Firstly, the Australian Fur Seal *A. pusillus doriferus* (a subspecies of the South African or Cape Fur Seal *A. p. pusillus*) occurs here between the New Zealand and more westerly Australian populations of *A. forsteri* (see Fig. 2). Shaughnessy (1970) has suggested that the Australian and New Zealand populations of *A. forsteri* may have been geographically isolated since long before European activities began in the region. However, more recent distribution records (King 1976; Llewellyn *et al.* 1994; Warneke 1995) suggest geographic isolation may not be total, although genetic exchange could be slight. Three young New Zealand Fur Seals were stranded in New Caledonia between August 1972 and September 1973; they are believed to have originated from Australia or New Zealand (King 1976; Warneke 1995). It should also be noted that *A. forsteri* breeds on Maatsuyker Island (43°39'S, 146°17'E), south of Tasmania, within the breeding range of *A. p. doriferus* (Brothers and Pemberton 1990). Secondly, sealing localities in western Bass Strait, which were never identified precisely in the cargo records, would have been near the western edge of today's range of *A. p. doriferus*. Thus, if these two species occupied the same geographic ranges during the exploitive period around the Australian coast as they do today, either or both species could have been in individual seal skin cargoes landed from the various sealing localities in southeastern Australia. Warneke and Shaughnessy (1985) consider that *A. p. doriferus* was the original species that was harvested in Bass Strait proper during the eighteenth and nineteenth centuries. Because this species has attained subspecific status, it must have been present in southeastern Australia for a long time; certainly well before European settlement.

Collection records held by the departments of mammalogy at the South Australian Museum and the Museum of Victoria show *A. p. doriferus* extending as far west as Cape

du Couedic, Kangaroo Island (36°04'S, 136°42'E) and *A. forsteri* extending as far east as Lakes Entrance (37°54'S, 148°09'E). Warneke (1982) also states that stragglers of this latter species penetrate into Bass Strait as far east as 148°E. Australian Fur Seals are routinely seen at Cape Gantheaume and North Casuarina Island near the eastern and western ends of Kangaroo Island, respectively (Shaughnessy 1997). However, these stragglers are not evidence of former colonies where sealing activities would have been concentrated. Thus there is an overlap of several hundred kilometres in the current distribution of these two species; and if this prevailed during the fur seal hunting period, both species must have been included in many cargoes designated as having originated in Bass Strait. It cannot even be safely presumed that *A. forsteri* was the only species taken at Kangaroo Island, although it was probably the dominant one. East of Kangaroo Island, mixed cargoes would certainly have been involved; but with *A. p. doriferus* probably the dominant species in eastern Bass Strait.

New Zealand Fur Seals are now actively colonizing Kangaroo Island (Shaughnessy *et al.* 1995); but were they the original species on the island? If not, today's population could have come from New Zealand or Western Australia. However, because so many colonies of this species have been identified recently throughout southern Australia (Shaughnessy *et al.* 1994), it seems more likely that they were the original inhabitants of Kangaroo Island and recolonization took place by dispersal from one of the more adjacent colonies, possibly beginning with immature animals (Ling and Walker 1976). If there were no New Zealand Fur Seals left in South Australia when sealing ceased, why did *A. p. doriferus* then not extend its range? One reason must have been the very low level to which the *A. pusillus* population had also been reduced, so there was no pressure to extend beyond Bass Strait (Warneke 1999, in litt.). In the absence of any definite information and the fact that there is little likelihood of any being forthcoming, it must be tentatively concluded that the same species occupy the same ranges today as they did when discovered by early navigators and sealers more than two centuries ago.

Estimates of current population sizes of *A. forsteri* and *A. p. doriferus* are 50 000 to 100 000 (Taylor 1990) and 35 000 to 60 000 (Pemberton and Kirkwood 1994), respectively. Warneke and Shaughnessy (1985) estimated that the original *A. p. doriferus* population may have been two to five times the size of the then current population of 30 700; i.e.,

61 400 to 153 500. Shaughnessy *et al.* (1994) estimated the present Australian population of New Zealand Fur Seals to be 34 700.

While sea lion ("hair seal") skins were not nearly as valuable as fur seal pelts — fetching only 4 to 5 shillings each compared with £1 to £2 sterling for a fur seal skin — many thousands were harvested during the life of the sealing industry, as sea lions were also a source of oil. It is not possible, however, to differentiate between oil obtained from fur seals and that attributed to sea lions (or Southern Elephant Seals *Mirounga leonina*); and thereby estimate the number of sea lions killed for oil. Many of the recorded sea lion skin cargoes were quite small and it seems unlikely that larger shipments would have been missed: in fact three are included in Appendices 1 and 2. The figures cited were reported in ships' manifests and were not simply the accounts of sealing captains. Notwithstanding their lower commercial value, Australian Sea Lion numbers may have been no larger than they are today: 9 900–12 400, according to Dennis and Shaughnessy's (1996) estimate. Likewise, recent estimates give the size of the *Phocarcos hookeri* population as between 11 600 and 15 200 (Childerhouse and Gales 1998), the main concentrations occurring on the Auckland Islands.

Australian Sea Lions today occur at many scattered colonies between Houtman Abrolhos off the west coast of Western Australia and The Pages islands east of Kangaroo Island. The largest colonies number only a few hundred animals and if this situation also prevailed during the sealing era, it would have been difficult to obtain large cargoes. The shipments taken between 1832 and 1834 from Kangaroo Island could well have extinguished that particular population.

Bonner (1968) has described the chronologies and quantities relating to the fur seal industry at and around South Georgia in the South Atlantic, which may be compared with the Australasian situation discussed here. As he did in New Zealand, Captain James Cook (1777, cited by Bonner 1968) was also the first to observe fur seal colonies at South Georgia. The first sealing voyage to the island probably took place in 1786 when Thomas Delano sailed from London in command of the *Lord Hawkesbury*; and returned with a cargo of fur seal skins obtained at the Falkland Islands and South Georgia (Headland 1984). Thereafter, mainly American and English crews worked the sealing grounds, along with a few other nationalities. Thus the beginnings of the South Atlantic and Australasian sealing industries were roughly contemporaneous.

The peak year at South Georgia appears to have been 1801, when 112 000 skins were shipped. Weddell (1825, cited by Bonner 1968) stated that up to 1 200 000 fur seals had been killed by 1822, when they became almost extinct. Other sealing grounds were then sought. The South Shetlands were discovered in 1819; the peak catch of 250 000 seals occurred there in 1820/21, and by 1822, 320 000 skins had been shipped. Sealing was revived there briefly in the 1870s, and continued to 1888, by which time another 45 000 skins had been harvested. Their sealing history parallels that of the Antipodes Islands closely, apart from the exact timing.

The discovery and exploitation of fur seals in the South Atlantic followed a strikingly similar pattern to what took place around Australia and New Zealand. On the basis of figures quoted by Bonner, it appears that even the total harvests of seal skins in the two areas were almost the same: about 1.6 to 1.7 million. As in Australasia the seal stocks were depleted rapidly wherever colonies were exploited in the South Atlantic; and this occurred at about the same time.

The South Atlantic and Australian colonial sealing industries appear to have proceeded in parallel; the former being prosecuted in the main by American and English sealers and the latter mainly by Australian-based crews. While Australian sealers probably did not venture into the South Atlantic, it is known that a few American and English ships operated off the New Zealand and Australian coasts — possibly even in pre-colonial times (Richards 1996; Wace and Lovett 1973).

There appears to be one major difference, however, between the two areas: apart from the species concerned. The present population of Antarctic Fur Seals *Arctocephalus gazella* at South Georgia totals about one million, following a rapid increase after the cessation of sealing and in the presence of an almost unlimited source of food (Doidge *et al.* 1986). The much slower recovery of fur seal populations in Australasia may be a reflection of more limited local food resources. If that is so, how did such large fur seal populations survive before sealing began in the Australasian region? The answer may lie in the food preferences of the different species. Whereas *A. gazella* consumes krill, *A. forsteri* and *A. p. doriferus* eat fish and squid (Warneke 1982). These are heavily exploited today for human consumption around the Australian and New Zealand coasts. Krill, on the other hand, which used to be grazed in huge quantities by the great whales around South Georgia, is now available to other antarctic

and subantarctic animals, perhaps in greater quantities than previously. Isolation does not seem to be a factor, as fur seal populations at the Antipodes Islands and Macquarie Island can hardly be described as recovering, even compared with the New Zealand and south-eastern Australian colonies which today are much closer to human contact and commercial fisheries.

The sealing industry gave rise to Australia's first exports and, given that fur seal skins fetched from four shillings to more than a pound sterling on the London market, seals represented a significant source of income to the infant colony and enabled it to import essential items of food, clothing and equipment — not to mention the odd cargo of rum. If the total revenue from a reported harvest of 1.367 million skins at an average price of 15 shillings can be put at slightly over a million pounds sterling (2.5 to 3.0 million Australian dollars), that would equate to about 100 million dollars at today's values.

Colonial sealing was also an important generator of new employment and commercial opportunities; namely crews for sealing vessels, sealing gangs, ship builders and repairers, chandlers and victuallers. The 19 April 1806 issue of the *Bombay Courier* listed all the occupations of the entire Sydney population (stated to be 2 000) at that time; including 350 persons engaged in the Bass Strait sealing industry (Richards 1998, pers. comm.). Some of Australia's earliest wealthy families — Campbell, Palmer and Lord — established themselves from the profits of sealing (Fig. 16, see p. 325). However, this enterprise was not to last, due to the complete lack of any attempts to conserve the seal stocks themselves which have been very slow to recover almost two centuries later.

ACKNOWLEDGEMENTS

I am very grateful to Rhys Richards, Peter Shaughnessy, Rowland Taylor and Robert Warneke for their critical comments on earlier drafts of this paper, and for providing or drawing my attention to many useful sources of information. I also thank the staff of the National Library of Australia, the Mortlock Library of South Australia, the Mitchell Library of New South Wales and the Australian National University Library, Canberra, for their help in this study. Catherine Kemper and Lina Frigo of the South Australian Museum and Museum of Victoria, respectively, provided collection-based fur seal distributional data.

The cargo histograms were drafted by Joanne Goodwin and the appendices, from which the histograms were prepared, were

typed by Patricia Spark, supported by a grant from the South Australian Wildlife Conservation Fund; which also met costs of preparing some of the illustrations.

The Royal Zoological Society of South Australia gave permission for me to reproduce the distribution maps from their 1978 Centenary Symposium volume. Robert Campbell, great great grandson of the Sydney merchant, and Mr Sandy Newman provided the colour illustrations of the *Perseverance* and Campbell's wharf in Sydney, which were published in the late Charles Newman's history of the Campbell family (into which he married). Mrs F. H. Bauer permitted me to use the photograph of salt collecting on Kangaroo Island from her late husband's PhD thesis.

I thank the Editor of the *Australian Zoologist* for inviting me to submit this paper for publication and the generous allocation of space for such a work with all of its supporting material.

Finally, I thank my wife, Pauline, for typing successive drafts of the manuscript and bearing with me over many years as I scoured the numerous historical accounts which form the basis of this study.

REFERENCES

- Abbott, I., 1979. The past and present distribution and status of sea lions and fur seals in Western Australia. *Records West. Aust. Mus.* 7: 375–90.
- Bauer, F. H., 1959. Regional Geography of Kangaroo Island. Ph.D. thesis, Australian National University, Canberra.
- Begg, A. C. and Begg, N. C., 1979. *The World of John Boulton Including an Account of Sealing in Australia and New Zealand*. Whitcoulls Publishers: Christchurch.
- Bethell, L. S., 1980. *The Story of Port Dalrymple: Life and Work in Northern Tasmania*. Blubberhead Press: Hobart.
- Bonner, W. N., 1968. The fur seal of South Georgia. *Brit. Antarc. Sur. Scient. Rep.* 56: 1–81.
- Bowden, K. M., 1964. *Captain James Kelly of Hobart Town*. Melbourne University Press: Melbourne.
- Brothers, N. P. and Pemberton, D., 1990. The status of Australian and New Zealand fur seals at Maatsuyker Island, southwest Tasmania. *Aust. Wildl. Res.* 12: 563–69.
- Carroll, J. R., 1989. *Harpoons to Harvest*. Warrnambool Institute Press: Warrnambool.
- Childerhouse, S. and Gales, N., 1998. Historical and modern distribution and abundance of the New Zealand sea lion *Phocartos hookeri*. *NZ J. Zool.* 25: 1–16.
- Cook, J., 1777. *A voyage Towards the South Pole and Round the Work, Performed in His Majesty's Ships Resolution and Adventure in the years 1772, 1773, 1774 and 1775*, 2 Vols. W. Strahan and T. Cadell: London.
- Cumpston, J. S., 1968. *Macquarie Island. ANARE Scient. Rep. Ser. A(1)*: 1–380.

- Cumpston, J. S., 1973. *First Visitors to Bass Strait*. Roebuck Society Publication No. 7: Canberra.
- Cumpston, J. S., 1974. *Kangaroo Island 1800-1836* (2nd Ed). Roebuck Society Publication No. 1: Canberra.
- Cumpston, J. S., 1977. *Shipping Arrivals and Departures, Sydney, 1788-1825*. Roebuck Society Publication No. 22: Canberra.
- Dennis, T. E. and Shaughnessy, P. D., 1996. Status of the Australian seal lion, *Neophoca cinerea*, in the Great Australian Bight. *Wild. Res.* 23: 741-54.
- Doidge, D. W., McCann, T. S. and Croxall, J. P., 1986. Attendance behavior of Antarctic fur seals. Pp. 102-14 in *Fur seals: Maternal Strategies on Land and at Sea* ed by R. L. Gentry and G. L. Kooyman. Princeton University Press: Princeton.
- Flinders, M., 1814. *A Voyage to Terra Australis... Prosecuted in the Years 1801 (to) 1803 in His Majesty's Ship the Investigator...* Vol. 1. G. and W. Nicol: London.
- Fowler, R. M., 1980. *The Furneaux Group Bass Strait, Vol. 1*. Roebuck Society Publication No. 28: Canberra.
- Garden, D. S., 1977. *Albany, a Panorama of the Sound from 1827*. Melbourne University Press: Melbourne.
- Gill, J. C. H., 1966/67. Notes on the sealing industry of early Australia. *J. Proc. Roy. Hist. Soc. Qld* 8(2) (1966-67): 218-45.
- Hainsworth, D. R., 1972. *The Sydney Traders: Simeon Lord and his Contemporaries 1788-1821*. Cassell Australia: Melbourne.
- Headland, R., 1984. *The Island of South Georgia*. Cambridge University Press: Cambridge.
- Hindell, M. J. and Burton, H. R., 1988. The history of the elephant seal industry at Macquarie Island and an estimate of the pre-sealing numbers. *Papers Proc. Roy. Soc. Tas.* 122: 159-76.
- Hooper, R. H., 1974. *The King Island Story*. Peko-Wallsend Ltd: Sydney.
- Kerr, I. S., 1976. *Campbell Island: A History*. A. H. and A. W. Reed: Wellington.
- King, J. E., 1976. On the identity of three young fur seals (genus *Arctocephalus*) stranded in New Caledonia (Mammalia, Pinnipedia). *Beaufortia* 25: 97-105.
- Ling, J. K., 1978. The status of endangered Australian marine mammals. Pp. 67-74 in *The Status of Endangered Australian Wildlife*. Royal Zoological Society of South Australia: Adelaide.
- Ling, J. K., 1987. The New Zealand fur seal, *Arctocephalus forsteri* (Lesson), in South Australia. National Oceanic and Atmospheric Administration Technical Report, National Marine Fisheries Service 51: 53-55.
- Ling, J. K. and Walker, G. E., 1976. Seal studies in South Australia; progress report for the year 1975. *Sth Aust. Nat.* 50: 59-68, 72.
- Llewellyn, L., Ellis, M., Martin, J. and Ferguson, A., 1994. *Atlas of New South Wales Wildlife: Marine Mammals and Reptiles*. NSW National Parks and Wildlife Service, Hurstville. 26 Pp.
- McNab, R., 1909. *Murihiku: A History of the South Island of New Zealand and the Islands Adjacent and Lying to the South from 1632 to 1835*. Whitcombe and Tombs: Wellington.
- McNab, R., 1914. *From Tasman to Marsden: A History of Northern New Zealand from 1642 to 1818*. J. Wilkie and Co. Ltd.: Dunedin.
- McNally, J. and Lynch, D. D., 1954. Notes on the food of Victorian seals. Fauna Report No. 1: 1-16 (mimeo). Director of Fisheries and Game: Melbourne.
- Murray, L. C., 1927. *An Account of the Whaling and Sealing Industries of Van Diemen's Land to 1850*. Thesis, University of Tasmania, Hobart.
- Newman, C. T., 1961. *The Spirit of Wharf House: Campbell Enterprise from Calcutta to Canberra 1788-1930*. Angus and Robertson: Sydney.
- Nicholson, I. H., 1983. *Shipping Arrivals and Departures Tasmania. Vol. I, 1803-1833 (Parts I, II and III)*. Roebuck Society Publication No. 30: Canberra.
- Nicholson, I. H., 1985. *Shipping Arrivals and Departures Tasmania. Vol. II, 1834-1842 (Parts I, II and III) and Gazetteer 1803-1842*. Roebuck Society Publication No. 33: Canberra.
- Norman, L., 1946. *Sea Wolves and Bandits*. J. Walsh and Sons: Hobart.
- Nunn, J. M., 1989. *This Southern Land. A Social History of Kangaroo Island 1880-1890*. Investigator Press: Adelaide.
- Pemberton, D. and Kirkwood, R. J., 1994. Pup production and distribution of the Australian fur seal *Arctocephalus pusillus doriferus*, in Tasmania. *Wild. Res.* 21: 341-52.
- Peron, F., 1816. *Voyage de Decouvertes aux Terres Australes*, Vol. 2. Paris.
- Plomley, B. and Henley, K. A., 1990. The sealers of Bass Strait and the Cape Barren Island community. *Papers Proc. Tas. Hist. Res. Assoc.* 37(2/3): 1-91.
- Richards, R., 1982. *Whaling and Sealing at the Chatham Islands*. Roebuck Society Publication No. 21: Canberra.
- Richards, R., 1994. The "upland seal" of the Antipodes and Macquarie Islands: a historian's perspective. *J. Roy. Soc. NZ* 24(3): 289-95.
- Richards, R., 1995. *Murihiku Reviewed: a Revised History of Southern New Zealand from 1804 to 1844*. Lithographic Services: Wellington.
- Richards, R. (ed), 1996. *Jorgen Jorgenson's Observations on Pacific Trade; and Sealing and Whaling in Australian and New Zealand Waters Before 1805. Part I. Jorgenson's Observations* translated by Lena Knight. Paremata Press: Wellington.
- Richards, R., 1996. *Jorgen Jorgenson's Observations on Pacific Trade; and Sealing and Whaling in Australian and New Zealand Waters Before 1805. Part II. Jorgen Jorgenson in New Zealand in 1804 and 1805*. Paremata Press: Wellington.
- Rintoul, J., 1964. *Esperance Yesterday and Today*. Service Printing Co.: Perth.
- Ruediger, W. J., 1980. *Border's Land: Kangaroo Island 1802-1836*. Wynnis Ruediger: Morgan (South Australia).
- Shaughnessy, P. D., 1970. Serum protein variations in southern fur seals *Arctocephalus* spp., in relation to their taxonomy. *Aust. J. Zool.* 18: 331-43.
- Shaughnessy, P. D., 1997. Abundance of New Zealand Fur Seals *Arctocephalus forsteri* at some colonies in South Australia, 1995/96. Report to South Australian National Parks and Wildlife Service, Department of Environment and Natural Resources. 41 Pp.
- Shaughnessy, P. D. and Fletcher, L., 1987. Fur seals, *Arctocephalus* spp., at Macquarie Island. National Oceanic and Atmospheric Administration Technical Report, National Marine Fisheries Service 51: 177-88.

- Shaughnessy, P. D., Gales, N. J., Dennis, T. E. and Goldsworthy, S. D., 1994. Distribution and abundance of New Zealand fur seals, *Arctocephalus forsteri*, in South Australia and Western Australia. *Wild. Res.* **21**: 667-95.
- Shaughnessy, P. D., Goldsworthy, S. D. and Libke, J. A., 1995. Changes in the abundance of New Zealand fur seals, *Arctocephalus forsteri*, on Kangaroo Island, South Australia. *Wildl. Res.* **22**: 201-15.
- Shaughnessy, P. D., Shaughnessy, G. L. and Fletcher, R. L., 1988. Recovery of the fur seal population at Macquarie Island. *Papers Proc. Roy. Soc. Tas.* **122**: 177-87.
- Sorensen, J. H., 1969. New Zealand fur seals with special reference to the 1946 open season. Fisheries Technical Report No. 42: 1-80. New Zealand Marine Department, Wellington.
- Starke, J. (ed), 1986. *Journal of a Rambler. The Journal of John Boultonbee*. Oxford University Press: Auckland.
- Steven, M., 1983. *Trade, Tactics and Territory*. Melbourne University Press: Melbourne.
- Steven, M. J. E., 1978. Exports other than wool. Pp. 285-305 in *Economic Growth of Australia 1788-1821* ed by G. J. Abbott and N. B. Nairn. Melbourne University Press: Melbourne.
- Syme, M. A., 1984. *Shipping Arrivals and Departures Victorian Ports. Vol. 1, 1798-1845*. Roebuck Society Publication No. 32: Canberra.
- Taylor, R. H., 1982. New Zealand fur seals at the Bounty Islands. *NZ J. Mar. Freshw. Res.* **16**: 1-9.
- Taylor, R. H., 1990. Records of subantarctic fur seals in New Zealand (Note). *NZ J. Mar. Freshw. Res.* **24**: 499-502.
- Taylor, R. H., 1992. New Zealand fur seals at the Antipodes Islands. *J. Roy. Soc. NZ* **22**: 107-22.
- Taylor, R. H., 1996. Distribution, abundance and pup production of the New Zealand fur seal (*Arctocephalus forsteri* Lesson) at the Bounty Islands. Pp. 5-14 in *Science for Conservation 32*. Department of Conservation: Wellington.
- Tull, M., 1990. The development of Western Australia's fishing industry: a preliminary survey. *Internat. J. Maritime Hist.* **5**: 95-126.
- Vancouver, G., 1798. *Voyage of Discovery in the North Pacific Ocean and around the World... performed in the Years 1790... to... 1795, in the Discovery... and... Chatham...* Robinson: London.
- Wace, N. and Lovett, B., 1973. *Yankee Maritime Activities and the Early History of Australia*. Australian National University: Canberra.
- Warneke, R. M., 1982. The distribution and abundance of seals in the Australasian region, with summaries of biology and current research. *Mammals of the Seas*. FAO Fisheries Series 5, Vol. 4: 431-75 (FAO: Rome).
- Warneke, R. M., 1995. New Zealand fur seal *Arctocephalus forsteri* (Lesson, 1828). Pp. 245-46 in *Mammals of Victoria: Distribution, Ecology and Conservation* ed by P. W. Menkhorst. Oxford University Press: Melbourne.
- Warneke, R. M. and Shaughnessy, P. D., 1985. *Arctocephalus pusillus*, the South African and Australian fur seal: taxonomy, biogeography and life history. Pp. 53-77 in *Studies of Sea Mammals in South Latitudes* ed by J. K. Ling and M. M. Bryden. South Australian Museum: Adelaide.
- Weddell, J., 1825. *A Voyage Towards the South Pole, performed in the years 1822-24*. Longman, Hurst, Rees, Orme, Brown and Green: London.
- Wiltshire, J. G., 1976. *Captain William Petham Dutton First Settler at Portland Bay, Victoria. A History of the Whaling and Sealing Industries in Bass Strait, 1825-1868*. Wiltshire Publications.
- Wood Jones, F., 1925. *The Mammals of South Australia*. Government Printer: Adelaide.

APPENDIX 1

Shipping details of fur seal (and sea lion) skin cargoes obtained from Bass Strait and *King Island, 1798-1858. Compiled from Cumpston (1973, 1977), Fowler (1980), Hainsworth (1972), Murray (1927), Nicholson (1983, 1985), Norman (1946), Plomley and Henley (1990), Steven (1978, 1983), Syme (1984), Wiltshire (1976).

Ship	Departure Port	Departure Date	Arrival Date	Return Date	Arrival Date	Return Port	Cargo/Remarks
Nautilus	Sydney	7.10.1798	?	11.12.1798	25.12.1798	Sydney	5020 (+180 sea lion) skins
Nautilus	Sydney	10.1.1799	?	?	?	Sydney	3800 skins
Martha	Sydney	2.1.1799	?	?	14.12.1799	Sydney	1300 skins (+360 gallons oil)
Martha	Sydney	2.1.1800	?	?	6.3.1800	Sydney	cargo of skins and oil
Harrington	Sydney	2.9.1801	?	?	14.12.1801	Sydney	*3000 fur seal and sea lion skins
Harrington	Sydney	20.2.1802	12.3.1802	27.5.1802	31.5.1802	Sydney	*4300 skins
Harrington	Sydney	20.2.1802	12.3.1802	27.5.1802	31.5.1802	Sydney	900 (Kent's group, Bass Strait)
Margaret	Sydney	5.6.1802	?	8.7.1802	?	?	600 skins (wrecked August)
Endeavour	Sydney	2.1.1802	?	?	2.11.1802	Sydney	cargo
Surprise	Sydney	?	?	?	11.3.1803	Sydney	*7080 skins
Good Intent	Sydney	?	?	?	14.5.1803	Sydney	*2500 skins
Surprise	Sydney	31.3.1803	?	12.8.1803	26.8.1803	Sydney	*2100 skins
Surprise	Sydney	30.8.1803	?	?	14.9.1803	Sydney	6300 skins
John	Sydney	16.6.1803	?	12.8.1803	5.9.1803	Sydney	500-600 skins
Governor King	Sydney	4.9.1803	?	?	16.10.1803	Sydney	*1000 skins
John	Sydney	17.9.1803	12.12.1803	?	26.12.1803	Sydney	*cargo
Endeavour	Sydney	?	?	?	7.10.1803	Sydney	2200 skins
Good Intent	Sydney	16.6.1803	?	?	2.1.1804	Sydney	8000-9000 skins
Union	New York	10.10.1802	11.3.1803	?	6.1.1804	Sydney	*5000 skins
Governor King	Sydney	25.10.1803	?	?	26.12.1803	Sydney	*700 skins
Edwin	Sydney	20.10.1803	?	?	26.11.1803	Sydney	*400 skins
Charles	Boston	7.10.1803	?	?	2.12.1803	Boston	sealing
Endeavour	Sydney	2.10.1803	?	?	17.1.1804	Sydney	*3300 skins
Edwin	Sydney	2.12.1803	?	27.1.1804	8.2.1804	Sydney	1600 skins
John	Sydney	?	?	?	21.2.1804	Sydney	7300 skins
Good Intent	Sydney	2.1.1804	?	?	15.3.1804	Sydney	1000 skins
Nancy	Sydney	20.4.1804	?	?	6.5.1804	Hobart	sealing
Endeavour	Sydney	8.2.1804	?	?	28.5.1804	Sydney	2475 fur seal and sea lion skins
Ship	Departure Port	Departure Date	Arrival Date	Return Date	Arrival Date	Return Port	Cargo/Remarks
Governor King	Sydney	5.4.1804	?	?	16.6.1804	Sydney	*3000 skins
George	Sydney	2.2.1804	?	?	29.5.1804	Sydney	*600 skins
Edwin	Sydney	?	?	?	2.9.1804	Hobart	sealing
Governor King	Sydney	2.6.1804	?	18.9.1804	2.10.1804	Sydney	*3500 skins (+2000 left behind)
Endeavour	Sydney	15.9.1804	?	?	30.10.1804	Sydney	1100-1200 skins
Scorpion	Sydney	5.5.1804	?	?	15.9.1804	Sydney	*2,825 skins
Trimmer	Sydney	?	?	?	27.12.1804	Sydney	(cargo of sea lion skins)
Nancy	Sydney	16.11.1804	?	?	19.12.1804	Sydney	cargo of skins
Endeavour	Sydney	2.11.1804	?	?	22.1.1805	Sydney	cargo of skins
Fly	Sydney	2.1.1804	?	?	30.1.1805	Sydney	skins and oil
Governor King	Sydney	?	?	?	13.3.1805	Sydney	3200 skins
Governor King	Sydney	5.4.1805	?	?	16.6.1805	Sydney	2000 skins
Ceres	London	2.9.1804	?	?	2.2.1805	Hobart	sealing
Nancy	Port Dalrymple	?	?	?	2.3.1805	Hobart	sealing
Nancy	Sydney	10.1.1805	?	?	18.4.1805	Jervis Bay	3187 skins (subsequently wrecked)
George	Sydney	15.2.1805	?	?	17.5.1805	Sydney	*3000 skins
Governor Hunter	Sydney	?	?	?	19.6.1805	Hobart	sealing
Honduras Packet	Sydney	?	?	?	20/22.7.1805	Sydney	7000 skins
Raven	Sydney	16.3.1805	7.4.1805	4.7.1805	20.7.1805	Sydney	cargo of skins
Ceres	Sydney	?	?	?	3/4.9.1805	Sydney	2000 skins
Governor Hunter	Sydney	27.9.1805	?	?	4.12.1805	Sydney	300 skins
Raven	Sydney	2.9.1805	?	?	21.1.1806	Sydney	cargo of skins
Venus	Sydney	?	?	?	19.3.1806	Sydney	5000 skins
Endeavour	Sydney	?	?	?	15.10.1806	Sydney	6000 skins
"Boat"	Hobart	2.9.1806	?	?	31.1.1807	Hobart	2000 skins
Marcia	Sydney	?	?	?	14.2.1807	Sydney	cargo of skins
Governor Hunter	Sydney	2.2.1807	?	?	23.5.1807	Sydney	skins and oil
Active	Sydney	?	?	?	24.7.1809	Sydney	1300 skins
Governor Hunter	Sydney	2.3.1809	?	?	3.4.1810	Sydney	2000 skins (+1000 lost)
King George	Sydney	22.6.1810	?	?	6.7.1810	Hobart	sealing
Lady Nelson	Sydney	?	?	?	20.7.1810	Sydney	2500 skins
Endeavour	Norfolk Island	5.7.1810	?	?	25.8.1810	Sydney	40 skins
Ship	Departure Port	Departure Date	Arrival Date	Return Date	Arrival Date	Return Port	Cargo/Remarks
Eliza	Sydney	2.12.1809	?	?	2.9.1810	Hobart	300 skins
Hope	Sydney	2.8.1811	?	?	2.1.1812	Hobart	sealing
Brothers	Sydney	?	?	?	26.3.1812	Sydney	*skins and oil
Margaret	Sydney	?	?	?	4.5.1812	Sydney	960 skins
Elizabeth & Mary	Sydney	?	?	?	27.6.1812	Sydney	2500 - 3000 skins
Brothers	Sydney	29.12.1812	?	?	31.5.1813	Sydney	7070 skins
Henrietta Packet	Hobart	2.2.1813	?	?	30.4.1813	Sydney	skins
Henrietta Packet	Sydney	28.5.1813	?	?	2.6.1813	Hobart	skins
Trial	Sydney	11.9.1813	?	?	2.10.1813	Hobart	sealing
Elizabeth & Mary	Sydney	14.8.1813	?	?	12.1.1814	Sydney	4100 skins
Henrietta Packet	Sydney	18.9.1813	?	?	20.2.1814	Hobart	skins

Appendix 1 — continued

Ship	Departure Port	Departure Date	Arrival Date	Return Date	Arrival Date	Return Port	Cargo/Remarks
Mary & Sarah	Hobart	?	?	?	1.3.1814	Hobart	skins
Brothers	Sydney	?	?	?	2.3.1814	Hobart	sealing
Henrietta Packet	Sydney	11.5.1814	?	?	2.6.1814	Hobart	sealing(?)
Elizabeth & Mary	Sydney	9.2.1814	?	?	19.6.1814	Sydney	2640 skins
Henrietta Packet	Sydney	27.9.1814	?	?	25.10.1814	Hobart	sealing
William & Anne	Sydney	?	?	?	2.12.1814	Hobart	sealing
Henrietta Packet	Sydney	?	?	?	2.1.1815	Hobart	sealing
John Palmer	Sydney	4.4.1815	?	?	2.4.1815	Hobart	sealing
Henrietta Packet	Sydney	28/29.5.1815	?	?	25.6.1815	Hobart	sealing
Elizabeth	Sydney	?	?	?	4.8.1815	Hobart	340 skins
Henrietta Packet	Sydney	?	?	?	2.10.1815	Hobart	270 skins
John Palmer	Hobart	?	?	?	2.10.1815	Sydney	250 skins
"Boat"	Hobart	2.12.1815	?	?	24.1.1816	Hobart	172 skins
Elizabeth	Hobart	?	?	?	25.4.1816	Hobart	sealing
Henrietta Packet	Sydney	4.6.1816	?	?	24.8.1816	Hobart	sealing
Henrietta Packet	Hobart	2.10.1816	?	?	2.10.1816	Hobart	skins and oil
Rosetta	Sydney	2.11.1816	?	?	1.4.1817	Sydney	5000 skins
Young William	Sydney	?	?	?	3.5.1817	Hobart	sealing
Rosetta	Sydney	?	?	?	31.5.1817	Hobart	sealing
Sophia	Hobart	22.6.1817	?	?	20.8.1817	Hobart	sealing
Endeavour	Sydney	?	?	?	11.4.1817	Sydney	1514 skins
"Boat"	Hobart	2.5.1818	?	?	?	Port Dalrymple	sealing
Sophia	Hobart	?	?	?	1.6.1818	Sydney	2700 skins
Ship	Departure Port	Departure Date	Arrival Date	Return Date	Arrival Date	Return Port	Cargo/Remarks
Endeavour	Sydney	9.6.1818	?	?	9.1.1819	Sydney	*560 skins
John Palmer	Hobart	2.11.1818	?	?	21.6.1819	Sydney	2896 skins
Jupiter	Sydney	?	?	?	19.10.1819	Sydney	50 fur seal (+5 sea lion) skins
Glory	Sydney	30.10.1819	?	?	13.11.1819	George Town	520 skins
Young William	Hobart	?	?	?	5.1.1820	Hobart	seal skins
Haweis	Hobart	2.1822	?	?	2.10.1822	Sydney	500 skins
Nereus	Hobart	15.12.1822	?	?	2.12.1822	Sydney	350 skins
Ann	Hobart	14.12.1823	?	?	2.12.1823	Hobart	seal skins
Skelton	Hobart	8.6.1823	?	?	14.2.1824	Grimsby	300 skins
Nereus	Hobart	2.12.1823	?	?	?	Sydney	1000 skins
Ann	Launceston	?	?	?	27.1.1824	Port Dalrymple	seal skins
Governor Sorrell	Hobart	4.3.1824	?	?	2.4.1824	Port Dalrymple	sealing
John Bull	Hobart	8.9.1824	?	?	25.9.1824	Sydney	200 skins
Sally	Hobart	2.8.1824	?	?	2.8.1824	Hobart	200 skins
Liberty	Hobart	?	?	?	22.9.1824	Launceston	skins
Governor Brisbane	Hobart	27.10.1824	?	?	28.11.1824	Hobart	sealing
William & Ann	?	2.8.1824	?	?	6.1.1825	Port Dalrymple	150 skins
Liberty	?	?	?	?	?	?	*30 skins (seen by William & Ann)
Sally	Hobart	?	?	?	20.1.1825	Hobart	1200 skins
Alligator	Launceston	3.3.1825	?	?	12.3.1825	Sydney	850 skins
Governor Arthur	Launceston	2.3.1825	?	?	13.3.1825	Hobart	seal skins
Governor Macquarie	Hobart	19.4.1825	?	?	30.4.1825	Sydney	seal skins
Eclipse	Port Dalrymple	2.4.1825	?	?	27.4.1825	Sydney	seal skins
Governor Brisbane	Hobart	2.11.1824	?	?	13.4.1825	Hobart	3500 skins
Liberty	Launceston	2.8.1825	?	?	21.3.1826	Sydney	4000 skins
Caledonia	Hobart	2.1.1825	?	?	16.2.1826	Hobart	206 skins
Helen/Ellen	Hobart	2.11.1825	?	?	17.2.1826	Hobart	1200 skins
Recovery	Hobart	?	?	?	2.4/5.1826	Hobart	sealing
Prince Leopold	Hobart	?	?	?	29.5.1826	Hobart	285 skins
Caledonia	Hobart	?	?	?	2.1826	Hobart	1817 skins
Hunter	Hobart	10.11.1826	?	?	16.12.1826	Sydney	146 skins
Recovery	Hobart	2.1.1827	?	?	23.1.1827	Hobart	847 skins
Industry	Hobart	20.2.1827	?	?	2.1827	Sydney	253 skins
Speedwell	Hobart	2.1827	?	?	12.5.1827	Hobart	315 skins
Henry	Port Dalrymple	2.1827	?	?	20.10.1827	Sydney	349 skins
Resolution	Port Dalrymple	2.1827	?	?	5.11.1827	Sydney	skins
Henry	Hobart	4.4.1828	?	?	3.8.1828	Hobart	sealing
Waterloo	Launceston	20.9.1828	?	?	?	Sydney	1636 skins
Henry	Launceston	18.7.1829	?	?	20.9.1829	Launceston	250 skins
Governor Sorrell	Sydney	2.1829	?	?	2.12.1829	Sydney	140 skins
Mary Ann(e)	Sydney	29.12.1829	?	?	8.1.1830	Launceston	1600 (40 casks of) skins
Henry	Sydney	21.3.1830	?	?	10.4.1830	Hobart	858 skins
Resolution	Sydney	17.5.1830	?	?	25.5.1830	Launceston	6 skins
Industry	Hobart	29.7.1830	?	?	16.12.1830	Hobart	500 skins
"Boat"	Hobart	2.1830	?	?	2.12.1830	Hobart	62 skins
Elizabeth	Launceston	?	?	?	2.12.1830	Launceston	400 skins
Elizabeth	Launceston	2.11.1831	?	?	17.3.1832	Launceston	400 skins
Henry	Portland	2.11.1833	?	?	13.1.1834	Launceston	40 skins
William	Bass Strait	?	?	?	13.3.1835	Launceston	100 skins
Dolphin	Launceston	2.6.1836	?	?	20.7.1836	Sydney	200 skins
Bandicoot	Port Phillip	2.8.1840	?	?	3.10.1840	Hobart	seal skins
Lady Bird	Portland	2.1858	?	?	2.1858	Portland	300 skins

APPENDIX 2

Shipping details of fur seal (and sea lion) skin cargoes obtained from Kangaroo Island, 1802–1834.

Compiled from Bowden (1964), Carroll (1989), Cumpston (1968, 1973, 1974, 1977), Fowler (1980), Hainsworth (1972), McNab (1909), Nicholson (1983), Plomley and Henley (1990), Ruediger (1980), Syme (1984).

Ship	Departure Port	Departure Date	Arrival Date	Return Date	Arrival Date	Return Port	Cargo/Remarks
Union	New York	10.10.1802	20.2.1803	?	6.10.1803	Sydney	cargo of skins (2000)
Union	Sydney	1.4.1804	?	?	27.6.1804	Sydney	12,000 skins
Independence	Kangaroo Island	?	?	?	30.6.1804	Sydney	cargo of skins
Eliza	Sydney	7.10.1808	?	?	9.4.1809	Sydney	500 skins
Endeavour (N)	Sydney	?	?	?	29.4.1810	Sydney	1200 skins
Governor Hunter	Sydney	7.11.1808	?	?	3.4.1810	Sydney	2000 skins
Endeavour (S)	Sydney	7.9.1809	?	?	3.4.1810	Sydney	4000 skins
Eliza	Sydney	7.11.1809	?	?	21.10.1810	Sydney	300 skins
Campbell Macquarie	Sydney	22.3.1812	29.4.1812	21.5.1812	10.6.1812	Macquarie Is.	1650 skins (wrecked)
Hawkesbury Packet	Port Dalrymple	?	?	?	23.7.1812	Sydney	1600 skins
Fly	Sydney	24.11.1813	?	?	8.5.1814	Port Dalrymple	300 skins
Spring	Hobart	7.3.1815	?	?	7.4.1815	Hobart	600 skins
Spring	Hobart	17.8.1815	?	?	31.8.1815	Sydney	5900 skins
Henrietta Packet	Hobart	27.11.1814	?	?	1.4.1815	Hobart	3000 skins
Fly	Launceston	7.1.1815	?	?	8.5.1815	Launceston	cargo of skins
Spring	Hobart	19.9.1815	23.12.1815	?	11.5.1816	Hobart	600 skins
Henrietta Packet	Hobart	19.4.1816	?	?	4.5.1816	Sydney	380 skins
Rosetta	Sydney	1.1.1816	?	?	24.7.1816	Sydney	2000 skins
Spring	Hobart	7.11.1815	?	?	6.9.1816	Sydney	1300 skins
Endeavour (S)	Sydney	?	?	?	30.3.1817	Sydney	170 skins
Henrietta Packet	Sydney	?	?	?	7.6.1817	Sydney	2000 skins
Henrietta Packet	Port Dalrymple	?	?	?	19/21.8.1817	Sydney	40 skins
Endeavour	Sydney	27.4.1817	?	?	25.8.1817	Port Dalrymple	cargo of skins
Rosetta	Port Dalrymple	7.3.1818	?	?	12.4.1818	Launceston	3500 skins
Sinbad	Sydney	28/29.9.1818	?	?	26/27.1.1819	Sydney	400 skins
Governor Macquarie	Sydney	15.1.1819	7.1.1819	?	10.5.1819	George Town	1400 skins
Jupiter	Hobart	30.10.1818	?	?	1.4.1819	Hobart	3200 skins
Little Mary	Sydney	25.10.1819	?	?	10.3.1820	George Town	3300 skins
Glory	Sydney	?	?	?	7.8.1820	Sydney	5800 fur seal (+100 sea lion) skins
Queen Charlotte	Port Dalrymple	?	?	?	28/29.10.1820	Sydney	cargo of skins
Sophia	Hobart	25.11.1820	?	?	9.5.1821	Hobart	2000 skins
Little Mary	Port Dalrymple	?	?	?	21/22.9.1821	Sydney	2000 fur seal (+100 sea lion) skins
Minerva	Sydney	14.6.1820	?	?	25.3.1824	Sydney	8200 skins
Perseverance	Sydney	23.11.1823	?	?	5.6.1824	Sydney	4000 skins
Governor Sorrell	Sydney	4.3.1824	?	?	20.10.1824	Sydney	300 skins
Samuel	Sydney	15.10.1824	?	?	11.3.1825	Sydney	1500 skins
Nereus	Hobart	7.12.1824	?	?	11.3.1825	Sydney	3500 skins
Governor Sorrell	Sydney	29.3.1825	?	?	4.3.1826	Sydney	400 skins
Governor Arthur	Hobart	13.9.1826	?	?	7.1826	Sydney	100 skins
Woodman	Port Dalrymple	7.4.1826	?	?	20.10.1826	Sydney	300 skins
Fairy	Port Fairy	7.11/12.1828	?	?	5.2.1829	Sydney	700 skins
Madeira Packet	Portland	7.12.1828	?	?	21.4.1829	?	1500 skins
Henry	Launceston	7.10.1828	?	?	13.3.1829	Launceston	800 fur seal, 400 black seal skins
Snapper	Sydney	14.12.1828	?	?	5.2.1829	Sydney	750 skins
Resolution	Launceston	28.10.1830	?	?	7.1830	Sydney	27 skins
Resolution	Launceston	9.7.1831	?	?	7.1831	Sydney	250 skins
Elizabeth	Launceston	7.11.1831	20.12.1831	?	17.3.1832	Launceston	730 fur seal (+ 600 sea lion) skins
Elizabeth	Launceston	3.11.1832	?	?	6.4.1833	Launceston	1100 fur seal (+ 1000 sea lion) skins
Friendship	Launceston	?	?	?	11.4.1833	Launceston	cargo of skins
Elizabeth	Launceston	7.10/11.1833	?	?	7.4.1834	Launceston	500 fur seal (+ 400 sea lion) skins

APPENDIX 3

Shipping details of fur seal skin cargoes obtained from Western Australia, 1823–1844.

Compiled from Cumpston (1974), Garden (1977), Rintoul (1964), Tull (1990).

Ship	Departure Port	Departure Date	Arrival Date	Return Date	Arrival Date	Return Port	Cargo/Remarks
Alligator	Sydney	?	?	?	15.11.1823	Sydney	1600 skins
Ann	Sydney	?	?	?	12.6.1827	Sydney	800 skins
Madeira Packet	Sydney	5.11.1828	16.2.1829	20.3.1829	21.4.1829	Sydney	1500 skins
Henry	Launceston	7.1828	?	?	13.3.1829	Launceston	400 black seal skins
Prince of Denmark	Launceston	?	?	?	1.9.1829	Sydney	1000 skins
Thistle	Launceston	?	?	?	7.4.1834	Launceston	300 skins
Royal William	Hobart	?	?	4.3.1834	5.4.1834	Hobart	cargo of salt and seal skins
?	?	?	?	?	?	Albany	*1500 skins
?	?	?	?	?	1843/44	Albany	18 skins

*see text

APPENDIX 4

Shipping details of fur seal (and sea lion) skin cargoes obtained from around New Zealand,* 1792–1946.

Compiled from Cumpston (1968, 1973), Gill (1966/67), Kerr (1976), McNab (1909, 1914), Richards (1982, 1995, 1996), Steven (1983). *See text for explanation of areas covered.

Ship	Departure Port	Departure Date	Arrival Date	Return Date	Arrival Date	Return Port	Cargo/Remarks
Britannia	Sydney	23/24.10.1792	3.11.1792	7.10.1793	? 1794	Calcutta	4500 skins (see text)
Endeavour	Sydney	18.9.1795	? 1795	?	?	?	some seals - ship beached
Mercury	?America	? 1/2.1797	?	?	? 5.1797	Sydney	some seal skins
Hope	New Haven	?	?	?	2.11.1801	Sydney	34,000 skins
Venus	Sydney	23.11.1801	?	?	10.5.1801	Sydney	seal skins
Dart	Sydney	24.10.1803	?	?	?	Europe	1100 skins (ex Endeavour)
Endeavour	Sydney	?	?	?	7.10.1803	Sydney	2200 skins
Scorpion	?	?	?	?	30/31.3.1804	Sydney	4759 skins
Albion	?	?	?	?	4/5.7.1804	Sydney	13,000 skins
Contest	Sydney	?	?	?	9.2.1804	Sydney	5000 - 7000 skins
Speedwell	Sydney	? 8.1805	?	?	21.9.1806	Sydney	seal skins
Aurora	Sydney	30.6.1806	?	?	1.10.1806	Sydney	500 skins
Aurora	Sydney	24.10.1806	?	?	14.9.1807	Sydney	292 skins
Topaz	Nantucket	? 1807	?	26.11.1807	7.2.1808	Pitcairn	600 skins
Governor Bligh	Sydney	? 8.1808	?	?	11.3.1809	Sydney	10,000 skins
Pegasus	Sydney	24/26.8.1808	?	?	15.3.1809	Sydney	12,600 skins
Unity	England	? 1808	?	?	15.3.1809	Sydney	2000 skins
Fox	Sydney	30.9.1808	?	?	15.3.1809	Sydney	13,500 skins
Antipode	?	?	?	?	22.3.1809	Sydney	4000 skins
Brothers	?	? 1808	?	?	12.9.1809	England	42 skins (1 cask; see text)
Unity	Sydney	? 8.1809	?	?	27.10.1809	Sydney	3600 skins
Governor Bligh	Sydney	13.4.1809	?	?	19.1.1810	Sydney	10,400 fur seal (+ 193 sea lion) skins
Star	Sydney	20.1.1809	?	?	31.8.1809	Sydney	2000 skins
Pegasus	Sydney	3.5.1809	?	16.7.1809	? 1809	London	2283 skins
Brothers	Sydney	3.6.1809	?	9.11.1809	15.1.1810	Sydney	2000 skins
Star	Sydney	10.10.1809	?	?	26.3.1810	Sydney	600 skins
Perseverance	Sydney	? 10.1809	?	?	15/17.8.1810	Sydney	33 skins
Unity	Sydney	? 10.1809	?	?	15.8.1810	Sydney	6000 skins
Governor Bligh	Sydney	27.3.1810	?	?	18.8.1810	Sydney	1600 skins
King George	Sydney	22.6.1810	?	?	6/7.2.1811	Sydney	800 skins
Unity	Sydney	20.10.1810	?	?	20.3.1811	Sydney	5000 skins
Boyd	Sydney	14.12.1810	?	?	26.3.1811	Sydney	800 skins
Governor Bligh	Sydney	1.9.1812	?	?	15.12.1813	Sydney	14,000 skins (+ 2500 lost)
Governor Bligh	Sydney	15.5.1815	?	?	4.10.1816	Sydney	10,630 fur seal (+ 300 sea lion) skins
Governor Bligh	Sydney	7.12.1816	?	?	2.2.1818	Sydney	10,841 fur seal (+ 500 sea lion) skins
Sophia	Hobart	12.11.1817	?	?	27.3.1818	Hobart	3000 skins
Enterprise	Philadelphia	? 12.1815	?	?	11.5.1818	Philadelphia	1300 skins
Governor Bligh	Sydney	7.5.1818	?	?	30.3.1819	Sydney	10,516 skins
Elizabeth & Mary	Sydney	8.12.1819	?	?	27.1.1820	Sydney	4397 skins
Governor Bligh	Sydney	26.8.1819	?	?	3.4.1820	Sydney	5500 skins
General Gates	Hobart	?	? 6.1821	?	18.12.1822	?	1165 skins
Governor Bligh	Sydney	6.5.1820	?	?	17.2.1921	Sydney	12,000 skins
General Gates	Hobart	10.8.1821	?	10.11.1821	15.3.1822	Canton	11,000 skins
Hope	Sydney	20.11.1820	?	?	6.2.1821	Sydney	800 skins
Elizabeth	Sydney	10.11.1822	?	?	21.1.1823	Sydney	1500 skins
Wellington	Sydney	1.4.1823	?	?	23.9.1823	Sydney	4200 skins
Elizabeth	Sydney	13.2.1823	?	?	2.10.1823	Sydney	600 skins
Samuel	Sydney	27.5.1823	?	?	29.10.1823	Sydney	800 skins
Alligator	?	?	?	?	17.11.1823	Sydney	1600 skins
Elizabeth	Sydney	6.11.1823	?	?	30.3.1824	Sydney	5300 skins
Samuel	Sydney	16.11.1823	?	?	2.4.1824	Sydney	3500 skins
Wellington	Sydney	10.10.1823	?	?	3.4.1824	Sydney	3500 skins
Haweis	Sydney	20.11.1823	?	?	5.5.1824	Sydney	2000 skins
Glory	Port Dalrymple	? 8.1823	?	?	24.5.1824	Sydney	1333 fur seal (+ 151 sea lion) skins
Newcastle	Sydney	19.5.1824	?	?	10.10.1824	Sydney	900 skins
Elizabeth	Sydney	22.6.1824	?	?	25.2.1825	Sydney	3000 skins
Newcastle	Sydney	29.10.1824	?	?	12.3.1825	Sydney	1784 skins
Samuel	Sydney	15.10.1824	?	?	17.7.1825	Sydney	1200 skins
Henry	New York	? 1824	?	?	? 1825	?	1700 skins (not seen again)
Alligator	Sydney	9.4.1825	?	?	8.10.1825	Sydney	1460 skins
Hunter	Hobart	21.5.1825	?	?	11.11.1825	Launceston	500 fur seal (+ 500 sea lion) skins
Elizabeth	Sydney	?	?	?	17.1.1826	Sydney	4300 skins
Queen Charlotte	Sydney	?	?	?	25.1.1826	Sydney	850 skins
Alligator	Sydney	? 10.1825	?	?	13.5.1826	Sydney	4400 skins
Sally	Hobart	9.7.1825	?	?	6.6.1826	Hobart	260 skins
Prince of Denmark	Sydney	19.1.1826	?	?	8.9.1826	Sydney	400 skins
Samuel	Sydney	?	?	?	23.9.1826	Sydney	120 skins
Elizabeth	Sydney	? 1826	?	? 11.1826	29.12.1826	Sydney	390 skins
Glory	Sydney	18.7.1826	?	?	15.1.1827	?	800 skins (wrecked Chatham Is.)
Elizabeth & Mary	Sydney	?	?	?	12.3.1827	Sydney	3000 skins

Appendix 4 — continued

Ship	Departure Port	Departure Date	Arrival Date	Return Date	Arrival Date	Return Port	Cargo/Remarks
Samuel	Sydney	?	?	?	18.3.1827	Sydney	4500 skins
Elizabeth & Mary	Sydney	13.4.1827	?	?	20.6.1827	Sydney	cargo of skins
Samuel	Sydney	?.1827	11.5.1827	16.6.1827	29.6.1827	Sydney	1000 skins (+ 800 from Glory)
Elizabeth	Sydney	?	?	?	?.1.1828	Sydney	140 skins
Gurnett	Sydney	?	?	?	11.3.1828	Sydney	700 skins
Caroline	?	?	?	?	?.1.1829	Sydney	830 skins
Samuel	Sydney	?	?	?	?.3.1829	Sydney	830 skins
Haweis	Sydney	?	?	?	?.6.1829	Sydney	340 skins
Caroline	?	?	?	?	?.7.1829	Sydney	220 skins
Samuel	Sydney	?	?	?	?.7.1829	Sydney	170 skins
Elizabeth & Mary	Sydney	?	?	1.9.1829	22.9.1829	Sydney	330 skins
Madiera Packet	Sydney	?	?	?	?.11.1829	Sydney	370 skins
Samuel	Sydney	?	?	?	?.12.1829	Sydney	cargo of skins
Waterloo	Sydney	?	?	?	3.2.1830	Sydney	1185 skins
Samuel	Sydney	?	?	?	?.2.1830	Sydney	skins
Fairy	?	?	?	?	27.2.1830	Sydney	600 skins
Caroline	?	?	?	?	?.5.1830	Sydney	125 skins
Tula	Gravesend	14.7.1830	19.11.1830	12.12.1830	?	England	23 skins
Emma Kemp	Sydney	?	?	?	12.11.1830	Sydney	113 skins
Waterloo	Sydney	?	?	?	26.6.1830	Sydney	500 skins
Industry	?	?.1829	?	?	28.2.1831	Stewart Island	11,430 skins (from Subantarctic)
Samuel	?	?	?	?	?.3.1831	Sydney	500 skins
Henry	Launceston	1.12.1830	?	?	8.3.1831	Launceston	1600 skins
Waterloo	Sydney	?	?	?	9.3.1831	Sydney	700 skins
Caroline	Sydney	?	?	?	6.4.1831	Sydney	530 skins
Caroline	Sydney	?	?	?	8.7.1831	Sydney	74 skins
Caroline	Sydney	?	?	?	8.11.1831	Sydney	50 skins
Caroline	Sydney	?	?	?	26.12.1831	Sydney	20 skins
Waterloo	Sydney	?.1832	?	?	3.3.1832	Sydney	115 skins
Caroline	Sydney	?.1832	?	?	4.9.1832	Sydney	685 skins
Bee	Sydney	?.1832	?	?	?.1832	Sydney	15 skins
Waterloo	Sydney	?	?	?	25.2.1833	Sydney	6 skins
Caroline	Sydney	?	?	?	?.4.1833	Sydney	1000 skins
Sydney Packet	Sydney	?	?	?	?.6/9.1833	Sydney	132 skins
Sydney Packet	Sydney	?.9.1833	?	25.10.1833	11.11.1833	Sydney	200 skins
Lucy Ann	Sydney	?	?	?	?.11.1833	Sydney	1 cask of skins (40)
Joseph Weller	Sydney	?	?	?	31.12.1833	Sydney	3 skins
Sydney Packet	Sydney	?	?.8.1834	2.3.1834	14.3.1834	Sydney	185 skins
Lucy Ann	Sydney	?	?	12.4.1834	22.4.1834	Sydney	2 casks of skins (80)
Sydney Packet	Sydney	?	?	?	21.8.1834	Sydney	2 casks of skins (80)
Penelope	Hobart	?	?	?	21.4.1834	Hobart	cargo of skins
Joseph Weller	Sydney	4.12.1834	?	14.2.1835	4.3.1835	Sydney	65 skins
Sydney Packet	Sydney	?.1.1835	?	23.2.1835	12.3.1835	Sydney	496 skins
Sydney Packet	Sydney	21.7.1835	?	?	16.9.1835	Sydney	1 cask of skins (40)
Success	Sydney	?	?	?	5.12.1835	Sydney	bundle of skins (5)
New Zealander	Sydney	?	?	?.11.1835	18.12.1835	Sydney	2 casks of skins (80)
Ionic	Boston	?.4.1835	?	8.5.1836	?	?	52 skins
Sydney Packet	Sydney	?	?	?	?.6.1836	Sydney	285 skins
Emma	Sydney	15.10.1839	?	?	4.4.1840	Sydney	9 fur seal (+ 135 sea lion) skins
Rodney	?	?	?	2.5.1843	?	?	67 skins
Erin	?	?	?	?	?.4.1843	Wellington	2 casks of skins (80)
?	?	?	?	?	1915	?	300 skins
?	?	?	?	?	1946	?	6187 skins (open season)

APPENDIX 5

Shipping details of fur seal skin cargoes obtained at the Bounty Islands, 1807–1891.

Compiled from Fowler (1980), McNab (1914), Richards (1982, 1994, 1995, 1996), Taylor (1982).

Ship	Departure Port	Departure Date	Arrival Date	Return Date	Arrival Date	Return Port	Cargo/Remarks
Brothers	Sydney	11.6.1807	? 1807	?	30.1.1808	Sydney	38,000 skins
Santa Anna	Sydney	15.10.1808	?	?	? 1809	London	8000 skins
King George	Sydney	? 1808	?	?	13.3.1809	Sydney	7000 to 8000 (7500) skins
Rob Roy	Boston	?	?	? 1829	?	?	28 skins
William & Jane	Sydney	?	?	? 1880	?	Sydney	347 skins
Alert	Sydney	?	?	? 1880	?	Sydney	273 skins
?	?	?	?	? 1891	?	?	300? skins

APPENDIX 6

Shipping details of fur seal (and sea lion) skin cargoes obtained at the Auckland Islands, 1808–1916.

Compiled from Cumpston (1968), Kerr (1976), McNab (1909, 1914), Richards (1982).

Ship	Departure Port	Departure Date	Arrival Date	Return Date	Arrival Date	Return Port	Cargo/Remarks
Commerce	Sydney	6.2.1808	?	?	10.7.1808	Sydney	3000 skins
Unity	London	?	?	?	15.3.1809	Sydney	2000 skins
Queen Charlotte	Sydney	?	?	?	14.3.1824	Sydney	2200 skins
Henry	New York	? 1823	?	?	? 1824	New York	13,000 skins
Midas	Sydney	16.8.1824	27.8.1824	6.9.1824	? 1824	England	1600 skins
Wellington	Sydney	31.5.1824	?	?	9.3.1825	Sydney	5000 fur seal (+ 2000 sea lion) skins
Yankee	New York	1.8.1824	?	?	? 1826	New York	2000 skins
Samuel	Sydney	29.9.1825	?	5.12.1825	22.12.1825	Sydney	2000 skins
Sally	Hobart	13.10.1825	? 11.1825	? 2.1826	3.6.1826	Hobart	200 skins
Samuel	Sydney	?	?	?	28.5.1826	Sydney	3400 skins
Henry	New York	?	?	?	18.4.1826	New York	1300 skins
Caroline	Sydney	?	?	?	? 3.1833	Sydney	1000 skins
Caroline	Sydney	?	?	?	14.3.1834	Sydney	350 skins
Antarctica	?	?	?	?	? 1838	Storington	3000 skins
Nancy	Invercargill	?	?	?	29.10.1872	Invercargill	150 skins
Nancy	Invercargill	?	?	?	14.2.1873	Invercargill	400 skins
Alert	Invercargill	? 5.1881	?	?	? 8.1881	Invercargill	cargo (=251 skins; see text)
Awarua	Invercargill	22.6.1887	10.7.1887	22.7.1887	? 1887	Melbourne	176 skins
Janet Ramsay	Port Chalmers	6.10.1888	?	?	? 1888	Port Chalmers	16 skins
Janet Ramsay	Port Chalmers	11.9.1889	2.12.1889	20.12.1889	27.12.1889	Port Chalmers	16 skins
Janet Ramsay	Invercargill	7.7.1891	13.7.1891	14.8.1891	25.9.1891	Stewart Island	500 - 600 (550) skins
Gratitude	Invercargill	29.7.1891	?	?	16.9.1891	Invercargill	300 skins
Gratitude	Invercargill	26.8.1894	10.10.1894	1.11.1894	?	Invercargill	310 fur seal (+ 190 sea lion) skins
Rachel Cohen	Invercargill	26.9.1916	? 11.1916	4.11.1916	10.11.1916	Invercargill	500 skins

APPENDIX 7

Shipping details of fur seal (and sea lion) skin cargoes obtained at the Antipodes Islands, 1804–1809.

Compiled from Cumpston (1968, 1977), Fowler (1980), Hainsworth (1972), McNab (1909, 1914), Richards (1982).

Ship	Departure Port	Departure Date	Arrival Date	Return Date	Arrival Date	Return Port	Cargo/Remarks
Governor King	Sydney	?	?	?	? 11.1.1805	Sydney	100 skins
Ceres	Sydney	? 1.1804	?	?	?	London	20,000 skins
Independence	Sydney	? 1805	?	? 2.1806	? 1806	Canton	59,000 skins
Favorite	Sydney	11.6.1805	?	?	10.3.1806	Sydney	87,080 skins
Venus	Sydney	29.7.1805	?	?	24.1.1806	Sydney	few skins
Governor King	Sydney	5.11.1805	?	?	22.4.1806	Hunter River	200 skins at time of wreck
Governor King	Sydney	15.11.1805	?	? 3.1806	?	?	4000 skins left at islands
Ceres	Sydney	24.1.1806	?	?	? 1806	England	18,507 skins (2000 already on board)
Commerce	Sydney	30.7.1806	?	?	? 1806	Sydney	24,000 skins
Favorite	Sydney	29.7.1806	?	?	?	Canton	24,000 skins
Honduras Packet	Sydney	20.9.1805	?	6.1.1806	27.5.1806	England	34,000 skins
Star	Sydney	30.7.1806	?	?	29.12.1808	Sydney	14,000 skins (+ 5823 to London)
Topaz	Boston	?	17.12.1807	?	?	?	4000 skins
Commerce	Sydney	?	?	?	8.4.1807	Sydney	32,919 skins
Commerce	Sydney	6.11.1807	?	?	10.7.1808	Sydney	3000 skins
Governor Bligh	Sydney	8.9.1808	?	?	11.3.1809	Sydney	10,000 skins
Antipode	Sydney	?	?	?	18.3.1809	Sydney	4000 skins
Pegasus	Sydney	?	?	?	18.3.1809	Sydney	12,600 skins
Fox	Sydney	?	?	?	15.3.1809	Sydney	13,000 to 14,000 skins
Unity	London	?	?	?	15.3.1809	Sydney	10,000 skins
Prince of Denmark	Sydney	19.5.1825	?	1.12.1825	18.12.1825	Sydney	258 fur seal (+ 77 sea lion) skins

APPENDIX 8

Shipping details of fur seal (and sea lion) skin cargoes obtained at Campbell Island, 1810–1931.

Compiled from Cumpston (1968), Kerr (1976), McNab (1909), Richards (1982).

Ship	Departure Port	Departure Date	Arrival Date	Return Date	Arrival Date	Return Port	Cargo/Remarks
Aurora	Sydney	18.9.1810	2.11.1810	13.12.1810	29.12.1810	Sydney	100 skins
Perseverance	Sydney	2.1810	?	?	2.1810	Sydney	15,000 skins
Perseverance	Sydney	2.1811	?	?	2.1.1811	Sydney	100 skins
Elizabeth & Mary	Sydney	19/26.4.1823	?	?	2/3.10.1823	Sydney	814 skins
Elizabeth & Mary	Sydney	2.9.1825	?	?	19.4.1825	Sydney	3470 fur seal (+ 1290 sea lion) skins
Elizabeth & Mary	Sydney	12.6.1825	?	?	8.12.1825	Sydney	1910 fur seal (+ 380 sea lion) skins
Venus	Sydney	2.1831	28.5.1832	?	31.12.1832	Sydney	170 skins
New Zealander	Sydney	2.7.1835	?	?	11.3.1835	Sydney	170 fur seal (+ 1 sea lion) skins
Sarah Pile	Sydney	2.6.1873	?	?	2.9.1873	Sydney	60 skins
Bencleugh	Port Chalmers	28.3.1877	6.4.1877	18.6.1877	2.7.1877	Port Chalmers	90 fur seal and sea lion skins
Gratitude	Invercargill	29.7.1891	?	1.9.1891	16.9.1891	Invercargill	200 skins
Antarctic	Melbourne	12.4.1894	14.5.1894	1.11.1894	?	?	7 skins
Anna	Invercargill	?	?	9.12.1894	19.12.1894	Invercargill	309 skins
Hilda R	Halifax	?	?	?	2.1911	Halifax	300 skins
Hilda R	Halifax	?	?	?	2.1912	Halifax	500 skins
Rachel Cohen	Invercargill	11.8.1914	?	?	4.11.1914	Port Chalmers	2400 skins
Amokura	?	?	?	?	1914	?	1260 skins (63 sacks @ 20/sack)
Amokura	?	?	?	?	1915	?	820 skins (41 sacks @ 20/sack)
Rachel Cohen	Invercargill	?	?	?	2.1915	Invercargill	1800 skins
?	?	?	?	?	1919	Dunedin	13 skins (smuggled in)
?	?	?	?	?	1922	?	284 skins (open season)
Tutanekai	Invercargill	?	?	?	2.3.1923	Invercargill	278 skins
Tutanekai	Invercargill	?	?	?	2.1924	Invercargill	150 skins
Tamatea	Invercargill	2.1931	?	?	2.8.1931	Invercargill	102 skins

APPENDIX 9

Shipping details of fur seal skin cargoes obtained at Macquarie Island, 1810–1914.

Compiled from Cumpston (1968, 1973, 1974), Hindell and Burton (1988), Kerr (1976), McNab (1909), Nicholson (1983, 1985), Richards (1982), Shaughnessy and Fletcher (1987).

Ship	Departure Port	Departure Date	Arrival Date	Return Date	Arrival Date	Return Port	Cargo/Remarks
Perseverance	Sydney	25.6.1810	11.7.1810	18.7.1810	17.8.1810	Sydney	33 skins
Perseverance	Sydney	7.9.1810	2.10.1810	17.10.1810	8.1.1811	Sydney	299 skins
Aurora	Sydney	18.9.1810	?	?	29/31.12.1810	Sydney	100 skins
Elizabeth & Mary	Sydney	21.10.1810	31.12.1810	?	2.3.1811	Sydney	17,037 skins
Sydney Cove	Sydney	1810	?	?	13.4.1811	Sydney	1000 skins
Perseverance	Sydney	9.6.1811	25.9.1811	?	31.10.1811	Sydney	39,937 skins
Cumberland	Sydney	10.11.1811	?	20.11.1811	3.7.1812	Sydney	900 skins
Concord	Sydney	12.11.1811	?	10.3.1812	?	London	13,700 skins
Sydney Cove	Sydney	2.1.1812	?	11.3.1812	?	?	11,000 skins
Perseverance	Sydney	23.2.1812	?	7.4.1812	7.5.1812	Sydney	9000 skins
Governor Bligh	Sydney	7.11.1811	?	?	7.6.1812	Sydney	4000 skins
Perseverance	Sydney	4.7.1812	?	?	31.10.1812	Sydney	15,000 skins (+26,000 left)
Governor Bligh	Sydney	1.9.1812	?	?	15.12.1812	Sydney	14,000 skins
Elizabeth & Mary	Sydney	5/7.11.1812	?	?	20/28.1.1813	Sydney	1700 skins
Perseverance	Sydney	2.1812	?	?	2.1.1813	Sydney	5000 skins
Mary & Sally	Sydney	16.11.1813	30.11.1813	19.2.1814	13.3.1814	Hobart	256 skins
Elizabeth & Mary	Sydney	14.1.1815	?	?	3.3.1815	Sydney	2690 skins
Elizabeth & Mary	Sydney	11.4.1815	?	?	23.6.1815	Sydney	4790 skins
Elizabeth & Mary	Sydney	26.3.1816	?	?	20/28.5.1816	Sydney	1200 skins
Elizabeth & Mary	Sydney	25.1.1819	?	?	2.5.1819	Sydney	1243 skins
Elizabeth & Mary	Sydney	19/23.5.1819	?	?	31.10.1819	Sydney	3197 skins
Elizabeth & Mary	Sydney	8.12.1819	?	?	27.1.1820	Sydney	4397 skins
Regalia	Sydney	1.12.1820	?	?	1.3.1821	Hobart	800 skins
Wellington	Sydney	29.10.1823	?	?	3.4.1824	Sydney	cargo
Elizabeth & Mary	Sydney	29.10.1823	?	?	17.3.1824	Sydney	3500 skins
Wellington	Sydney	6.5.1825	?	?	18.9.1825	Sydney	1800 skins
Elizabeth & Mary	Sydney	10.1.1826	?	?	3.6.1826	Sydney	4000 skins
Elizabeth & Mary	Sydney	13.4.1827	?	1.6.1827	20.6.1827	Sydney	skins
Elizabeth & Mary	Sydney	9.6.1828	?	?	21.9.1828	Sydney	cargo
Elizabeth & Mary	Sydney	6.12.1828	?	?	7.4.1829	Sydney	cargo
Elizabeth & Mary	Sydney	19.5.1829	?	?	22.9.1829	Sydney	330 skins
"Enderby Expedition"	?	2.1837	?	?	?	?	large number of skins
Sarah Pile	Invercargill	11.10.1873	?	?	20.1.1874	Invercargill	60 skins
Gratitude	?	6.12.1894	31.12.1894	2.1.1895	?	?	cargo
Rachel Cohen	Invercargill	11.8.1914	31.10.1914	?	4.11.1914	Port Chalmers	cargo